June, 1953

SOAP and Sanitary Chemicals

In this issue...

Waxing protects appearance of new vinyl tile flooring

* * *

New aids to help retailers sell more soap at a profit

* * *

New insecticide, "Strobane," is rated for household use

* * *

Improving detergents with new type foam stabilizers

Cover photo . . . First aerosol waterless hand cleaner marketed by Peck's Products Co., St. Louis. Container by Crown Can Co., Philadelphia; valve by Dairy Whipt Co., Chicago; filler is Plaze, Inc., St. Louis, Mo.

1-5

NEW!

from the

D & O Laboratories

DIPAROMES

. . . A series of new masking agents developed by the D&O Perfume Laboratories for use in Dip Silver Polishes. Diparomes P will cover the unpleasant odor resulting from the contact of silverware and phosphoric acid. — Diparomes S perform the same function in polishes containing sulphuric acid. In addition the Diparomes are also designed to improve the odor rising from the freshly opened Dip Silver Polish bottle. Available in Violet, Rose, Pine and a number of other suitable fragrances. Ask your D&O representative for samples and detailed instructions.

OUR 154th YEAR OF SERVICE

Ask your D&O representative for testing quantities and specific recommendations.

DODGE & OLCOTT, INC.

180 Varick Street • New York 14, N. Y.

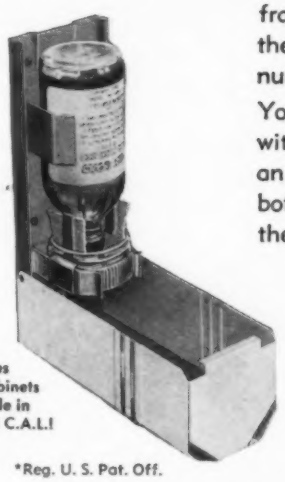
SALES OFFICES IN PRINCIPAL CITIES

ESSENTIAL OILS • AROMATIC CHEMICALS • PERFUME BASES • VANILLA • FLAVOR BASES

VITOZONE Air Fresh

Constant Repeat Sales!

VITOZONE* LIQUID AIR FRESH and DISPENSING CABINET



* Bottles and cabinets available in colorful C.A.L.!

*Reg. U. S. Pat. Off.

They work in pairs to give your sales an exhilarating lift! The bottle holds our own formula for bringing pleasant air to the mustiest of rooms. There is no intense perfumed odor to cover the foul one—just a wonderfully clean fragrance that seems to banish all odors in theatres, restaurants, lavatories, hospitals and nurseries.

You'll get bigger business—better business with VITOZONE* LIQUID AIR FRESH. Send an order now for the smartly labeled 8 oz. bottles or the combination deal that includes the unique dispensing cabinet.

Opened, the cabinet shows a wick-in-well construction that helps to spread VITOZONE* LIQUID AIR FRESH to every corner of the room. Closed it displays a sleek, modern design done in colored metal—a decorative asset anywhere.

Write now for additional information and a sample bottle.

FULD BROTHERS, INCORPORATED

MANUFACTURING CHEMISTS

Warehouses in Principal Cities

CONSISTENT QUALITY FOR OVER A QUARTER CENTURY

fb

702-710 S. WOLFE ST., BALTIMORE 31, MD.

West Coast Plant: Los Angeles, Calif.

CAND-DOX**

Candy's Wax with LUDOX* added

Candy's NEW NAME for the new floor treatment for

Increased Anti-Slip

Greater Durability

Lower Floor Maintenance Cost

2 GRADES

CAND-DOX #CS
Originally offered as CANDY'S SUPREME Special WR-AS in July 1950

CAND-DOX #BB
Originally offered as BRIGHT BEAUTY Special WR-AS in June 1951

CAND-DOX #CS and BB are made in any total percentage of solids 8% to 18% and in 24% concentrate.

CAND-DOX #CS is slighty more durable and higher priced than CAND-DOX #BB in like percentage of total solids.

floor treatments represent the finest products available where a higher than minimum recognized standard of anti-slip quality is desired. The resultant films from the use of these products are *HARD*, non-tacky, and will withstand wear, dirt and discoloring traffic marks.

DURABILITY and ANTI-SLIP . . . CAND-DOX products include a compensating factor—LUDOX*—in itself harder than wax. The addition of LUDOX* to the proper wax bases, perfected purposely to accomodate this additive, causes a greater coefficient of friction and therefore greater safety underfoot.

WATER RESISTANCE and REMOVABILITY in proper balance are very important in every maintenance program. In the development of the wax emulsion bases that go into CAND-DOX floor treatments, the important all-around high qualities of our (Standard) CANDY'S SUPREME, BRIGHT BEAUTY and other well known and accepted waxes were taken into consideration and accomplished in the final CAND-DOX products containing the new bases plus additive.

BEAUTY of floors maintained with CAND-DOX floor treatments, which are both hard and very anti-slip, is no less than remarkable and equal to the lustre for which our products have long been famed. The same buffing can be applied, if desired, and the same gloss will result.

Our policy in regard to use of new additives to our floor waxes has always been clear-cut . . . if a definite improvement can be accomplished we endeavor to formulate and combine new ingredients in such a way as to *conform to our very high standards of product function.* These standards in no case are ever sacrificed to climb on any "bandwagon" of *sales* appeal.

The laboratory work in ours or any organization is very important and the starting point for research and development of new useful products. However, FIELD TESTING is the real proof of the real value of any floor treatment. CAND-DOX floor treatments have been thoroughly field tested and are now being sold in quantity by many of our distributors, with success—again proving merit in FIELD USE.

** CAND-DOX contains CANDY'S wax emulsion with LUDOX* added in such proportion as to *fully* deliver the usefulness of this additive to floor wax.
*Trademark of E. I. du Pont de Nemours & Co., (Inc.) Reg. U. S. Pat. Off.

CAND-DOX is available for private brand resale and is sold only through distributors except for experimental accounts in Chicago essential to research.

Why not write us today for *free* samples and prices so that you can make your own FIELD TESTS?

The most complete line of water emulsion waxes of the highest quality available anywhere

CANDY'S SUPREME (Standard)
CANDY'S SUPREME Special WR
CANDY'S DELUXE
BRIGHT BEAUTY (Standard)
CANDY'S #640
#CS CAND-DOX
#BB CAND-DOX

All the above CANDY products are listed by Underwriters' Laboratories as "anti-slip floor treatment materials."

Wax Specialists for over 60 years

Candy & Company, Inc.

2515 W. 35th ST., CHICAGO

SOAP and Sanitary Chemicals

Volume XXIX, No. 6 June, 1953

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Editor
FRANK J. REILLY

Business Manager
THOMAS MORGAN

Publisher
MAC NAIR-DORLAND COMPANY

IRA P. MAC NAIR
President

GRANT A. DORLAND
Vice President and Treasurer

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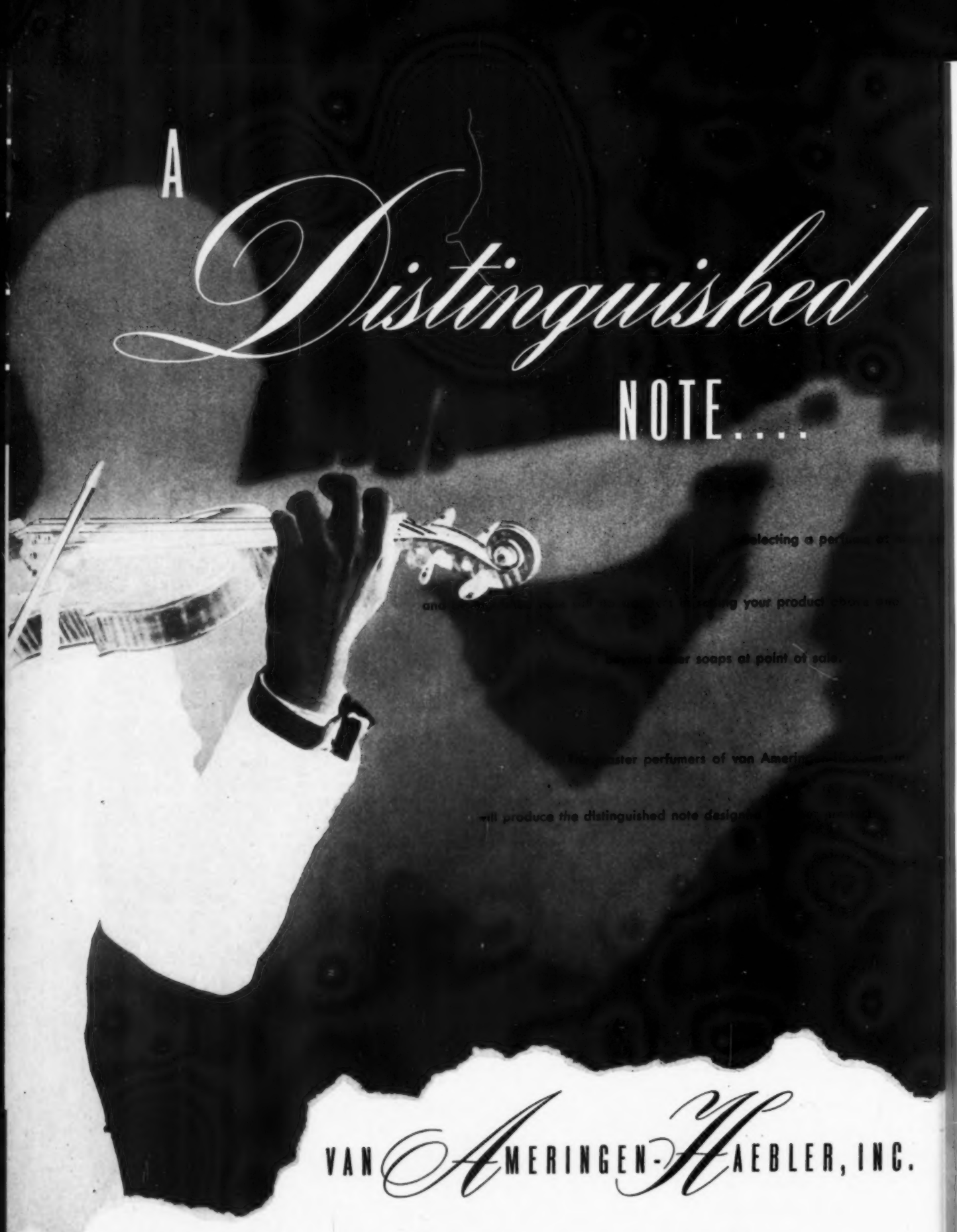
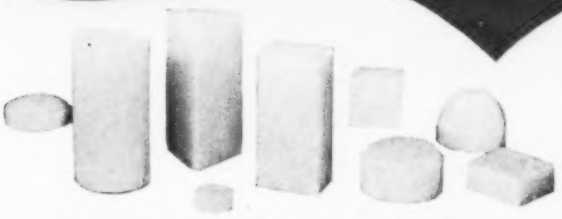


VAN AMERINGEN-HAEBLER, INC.

521 WEST 57th STREET, NEW YORK 19, N. Y.

the World's Finest Quality

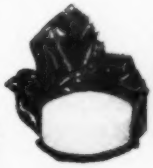
Deodorant Blocks



Every type for every purpose!

ULTRA DE LUXE
BLOCETTES

Destroys room odors
Hang on any wall!



Aire-Con
Bowl Deodorant and Moth Killer
Hang on wall—without removing from container—to kill moths and odors. Remove from container and hang by wire holder over bowl rim to **deodorize.**

are made by Hysan

932 West 38th Place • Chicago 9, Illinois

Manufacturers of Sanitary Chemicals since 1926 • Selling Exclusively to Jobbers and Distributors

CANCO

To the rescue... 25,000 times!

The Canco technical man is a very important person in your business.

No matter where your plants are located, you can rely on him to call *promptly* when you need him.

Day after day, Canco's trouble-shooters not only devote their energies to production line difficulties and to improving crop yields, but to suggesting new formulas and products . . . to supervising new installations . . . and to maintaining and increasing production.

During 1952, Canco technical men made more than 25,000 such calls on Canco customers.

If you do business with Canco, you know the value of this constant, conscientious technical service. If not, isn't it time you, too, added these superior services to your own?

Go first to the people who <u>are</u> first!

AMERICAN CAN COMPANY

CANCO

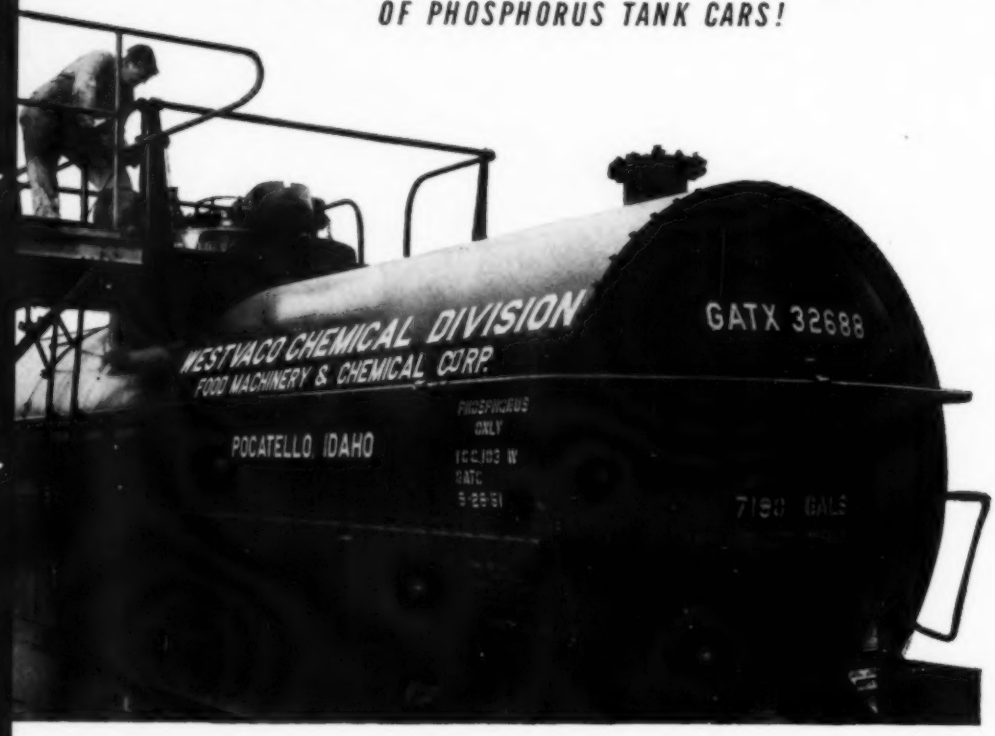
New York, Chicago, San Francisco; Hamilton, Canada

Here are a few of the special containers, developed by Canco, that have solved many marketing problems. Canco's knowledge and experience can provide the answer to *your* packaging needs.

on Active Duty from Coast to Coast

WORLD'S LARGEST FLEET

OF PHOSPHORUS TANK CARS!



Riding the "high-ball" westbound from Pocatello, Idaho to Newark, California and eastbound to Lawrence, Kansas and Carteret, New Jersey, nearly a hundred special GATX cars keep Westvaco phosphate plants steadily supplied with elemental Phosphorus. This unmatched inter-plant fleet of phosphorus tank cars is just one more reason for Westvaco's spectacular growth as a wholly-integrated phosphate producer.

First to tap immense new Western phosphate rock deposits, Westvaco has built a new-from-the-ground-up furnace at Pocatello every year for the past four years. Simultaneously, phosphate facilities have been built and expanded at three strategic locations coast to coast. Product lines have been widened, quality standards stepped up.

Whatever your needs for Sodium or Potassium Phosphates, Westvaco can supply the quantity, the quality, the packaging and the service you require. May we quote on a fair share of your purchases of any of the Westvaco Phosphates listed below?

Acid Sodium Pyrophosphate • Chlorinated Phosphate • Dipotassium Phosphate
Disodium Phosphate • Monopotassium Phosphate • Monosodium Phosphate
Phosphoric Acid 75% and 85% • Potassium Tripolyphosphate • Sodium Hexametaphosphate
Sodium Tripolyphosphate • Tetrapotassium Pyrophosphate • Tetrasodium Pyrophosphate
Tripotassium Phosphate • Trisodium Phosphate Anhydrous

WESTVACO CHEMICAL DIVISION
FOOD MACHINERY AND CHEMICAL CORPORATION
GENERAL OFFICES • 161 EAST 42nd STREET, NEW YORK 17
CHICAGO, ILL. • CINCINNATI, OHIO • CHARLOTTE, N. C. • DENVER, COLO.
ST. LOUIS, MO. • LOS ANGELES, CALIF. • NEWARK, CALIF.
PHILADELPHIA, PENN. • PITTSBURGH, PENN. • VANCOUVER, WASH.

Westvaco CHEMICALS

fmc

7,000,000 Times

"on the button"...

without a repair!

Your customer will NEVER change the packings on these dispensers . . . *he can't . . . there are none!!!*

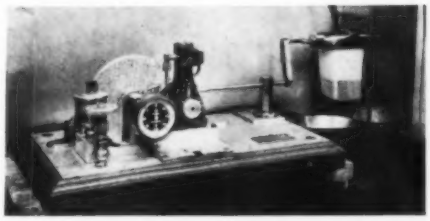
All Bobrick liquid dispensers with soap containers below the piston are "packing-less." They cannot leak or drip.

By actual test a typical Bobrick dispenser with HydroFlex mechanism was actuated *seven million* times, equivalent to more than 20 years use, before the first repair was needed. No equipment with packings could stand up like that.

Positive pump action of the exclusive HydroFlex mechanism delivers the soap under force pressure; no vacuum action which permits the soap to coagulate in piston when dispenser is idle for extended periods.

This force pump principle is the same as is used in the oil fields for pumping liquids from more than a mile below the surface.

Let your customers test this evolutionary packing-less modern equipment! Write today for returnable samples of these remarkable long-life dispensers.



Torture Test in Action—This machine mechanically simulated a hand motion depressing the plunger—duplicating more than 20 years of normal use. The Dispenser continued to pump soap without interruption or adjustment throughout the test.

These 6 Bobrick Dispensers operate without packings.

Bobrick 24* **Liquid** — **84*** **Lotion**

Streamlined and carefully engineered to reduce weight and cost. Translucent polystyrene container is superior to glass; stainless steel cover is superior to brass. Bobrick 44*, for lather, is similar in appearance only.

Bobrick 21 — **21MG**

This lower-price liquid soap dispenser is ideal for installation where shelves provide mounting limitations. Stainless steel cover, Bobrick HydroFlex mechanism.

Bobrick 829 — **829MG**

First furnished by Bobrick for Pullman Cars in 1912, this basin-mounted model is still a perennial favorite with schools and institutions everywhere. These improved "packingless" dispensers have been trouble free since introduced in 1947.

**Equipped with WallPlad for mounting with or without screws*

"There's a Bobrick Dispenser to fit your every customer's pocketbook."

Bobrick SOAP DISPENSERS

Since 1906

1214 Nostrand Ave., Brooklyn 25, New York • 1839 Blake Ave., Los Angeles 39, Calif.

Shipping stocks available at BROOKLYN, CHICAGO, ATLANTA, DALLAS and LOS ANGELES

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FOAM UP WITH

ONYX-OL

336 and 368

INDUSTRIAL CLEANERS
SHAMPOOS
FOAMING FIRE-FIGHTING SOLUTIONS
WETTABLE SULPHUR
BUFFING AND POLISHING COMPOUNDS
COSMETICS AND BUBBLE BATHS
POLISHES
ORE FLOTATION SOLUTIONS
PIGMENTS
HOUSEHOLD LIQUID DETERGENTS

For a dense, small-bubble, highly stable foaming agent, there is no better choice for addition to your liquid and other detergents and cleaning compounds than ONYX-OL.

ONYX-OL 336, a liquid fatty acid dialkanolamide, foams magnificently and with great stability, and serves equally well as a wetting, thickening, dispersing, emulsifying and cleaning agent. It offers exceptional compatibility and stability both in storage and solution.

ONYX-OL 368, a fatty acid monoalkanolamide in powder form, is the ideal answer to any problem involving foam stabilization primarily. It is designed especially for addition to sulphonated detergents.

Onyx also offers a wide variety of fatty acid types to meet your special requirements for any of the listed or similar products.
Write today without obligation.

ONYX
OIL & CHEMICAL COMPANY
INDUSTRIAL DIVISION
186 WARREN ST., JERSEY CITY 2, N. J.
CHICAGO • BOSTON • CHARLOTTE • ATLANTA

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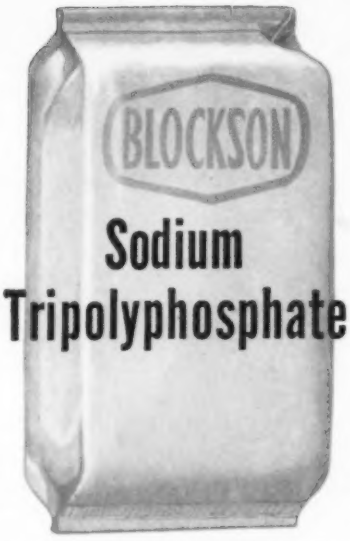

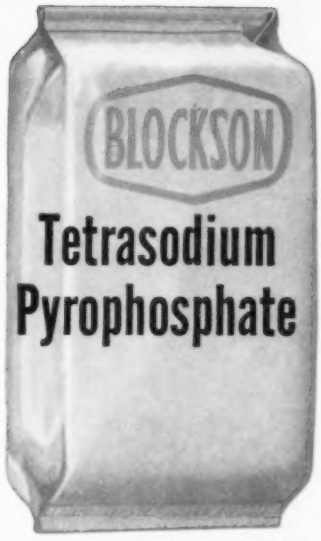

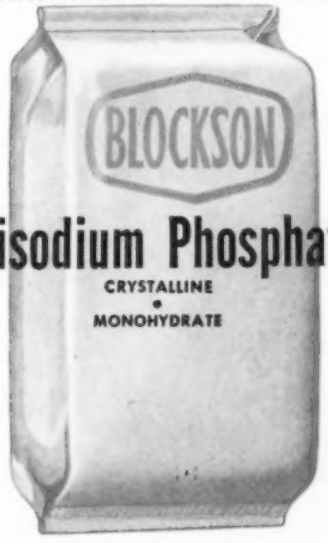

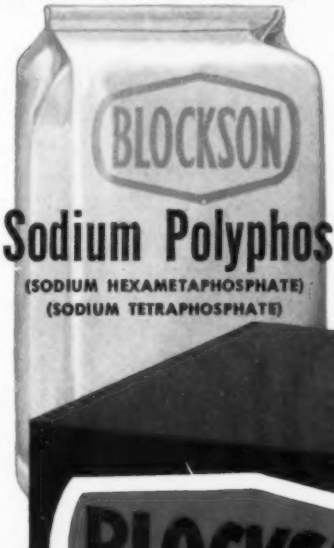

Sodium Polyphos is Blockson's brand name for a water soluble Glassy Sodium Phosphate with the desirable characteristics of Sodium Hexametaphosphate and Sodium Tetraphosphate.

ALSO MAJOR PRODUCERS OF:

SODIUM ACID PYROPHOSPHATE

CHLORINATED TRISODIUM PHOSPHATE

DISODIUM PHOSPHATE
ANHYDROUS • CRYSTALLINE

MONOSODIUM PHOSPHATE
ANHYDROUS • MONOHYDRATE

SODIUM FLUORIDE

SODIUM SILICOFLUORIDE

HYGRADE FERTILIZER

BLOCKSON CHEMICAL COMPANY
Joliet, Illinois

PHOSPHATES

From the World's Largest Producer of

MONSANTO Changes Untamed Phosphorus Into Useful Servant

To rip phosphorus from the ore that holds it, to control its violent, searing chemical activity and then to transform it into phosphates for endless uses in industry, takes skill, experience and equipment.

Monsanto—producers of more elemental phosphorus than anyone else in the world—has the men and the machines, the knowledge and the experience to do the job, and do it best.

From the five plants and two large research laboratories of the Phosphate Division, Monsanto obtains specialized knowledge about phosphates and phosphorus with which we continuously improve our products for soap and detergent, agricultural, pharmaceutical and numerous other industries which we serve.

Before your next order, why not call Monsanto, *first?*

Phosphate Division
1700 South Second Street
St. Louis 4, Missouri

Important Phosphates Made by Monsanto

Phosphoric Acid
Sodium Phosphates
Ammonium Phosphates
Potassium Phosphates
Calcium Phosphates
and many other products
derived from Elemental
Phosphorus.

MONSANTO
CHEMICALS — PLASTICS

SERVING INDUSTRY...WHICH SERVES MANKIND

DISTRICT SALES OFFICES:

Birmingham, Boston, Charlotte, Chicago, Cincinnati, Cleveland, Detroit, Los Angeles, New York, Philadelphia, Portland, Ore., San Francisco, Seattle.

In Canada, Monsanto Canada Limited, Montreal.

f Elemental Phosphorus

For the design, construction and operation of its Columbia, Tennessee plant, Monsanto received the Award for Chemical Engineering Achievement.

... for better coupling

IT WAS AN ADAGE with the ancients that oil and water never mix. But, long since, good coupling agents have been developed. Shell Chemical hexylene glycol, for example, effectively couples many such immiscible materials.

That's one reason why it's used in soluble cutting oils, automotive brake fluids and dry cleaning solutions . . . where *stability* is imperative.

Hexylene glycol makes an excellent penetrant in duplicator fluids, vat-dye pastes and printing inks. It is also a superior dispersant and wetting agent in polishes, cleaners and many chemical specialties.

In these applications, hexylene glycol proves to be a low-cost agent, as compared with other commonly used couplers. Find out how hexylene glycol can help you. A letterhead request will bring you a 32-page booklet of technical data.

SHELL CHEMICAL CORPORATION

Chemical Partner of Industry and Agriculture

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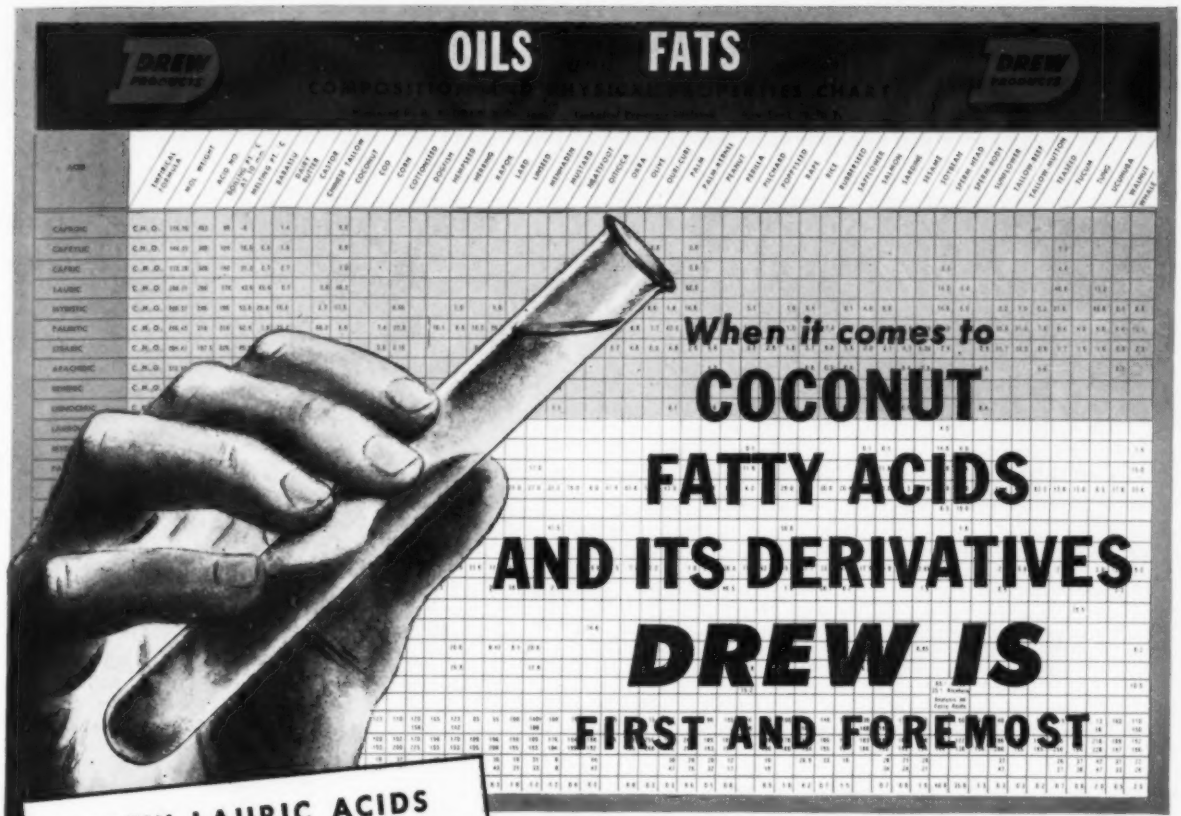
WESTERN DIVISION: 100 BUSH STREET, SAN FRANCISCO 6
Atlanta • Boston • Chicago • Cleveland • Detroit • Houston • Los Angeles • Newark • St. Louis
IN CANADA: Chemical Division, Shell Oil Company of Canada, Limited • Toronto • Montreal • Vancouver



DREW LAURIC ACIDS

APPROXIMATE CHEMICAL COMPOSITION	AAB %	ABL %	AB %	ABH %	AAAR %
Caproic C6	—	—	—	—	—
Caprylic C8	2.0	1.5	1.0	1.0	1.0
Capric C10	4.0	3.5	3.0	3.0	2.0
Lauric C12	90.0	70.0	60.0	60.0	45.0
Myristic C14	2.0	13.0	19.0	18.0	22.0
Palmitic C16	—	8.0	7.0	7.0	11.0
Stearic C18	—	1.0	1.0	0.0	2.5
Oleic C18	2.0	3.0	7.0	3.0	11.0
Linoleic C18	—	—	3.0	—	5.5
Linolenic C18	—	—	—	—	—
APPROXIMATE CHEMICAL DATA	**AAB**	**ABL**	**AB**	**ABH**	**AAAR**
FFA	139-144	138-141	126-132	126-132	116-126
TITRE °C	37.0 Min.	36.0 Min.	24-28	25	30.0 Max.
IODINE VALUE	3.0 Max.	5.0 Max.	8-16	3.0 Max.	14-22
ACID VALUE	277-287	275-281	251-263	251-263	232-253
SAP. VALUE	277-287	275-281	251-263	251-263	232-253
COLOR	15.0/2.0	20.0/3.0	20.0/3.0	15.0/2.0	35.0/5.0

Take LAURIC ACIDS, for instance

. . . notice the

- **WIDE CHOICE**
- **OUTSTANDING QUALITY**

Drew markets a variety of Lauric Acids, individually tailored to specific needs in the chemical, drug and cosmetic fields. Continual development of diversified physical properties makes it possible for you to select exactly the right Lauric Acid for your formula. And Drew's consistent uniform quality gives you a *plus* factor that means a head start for your product.

Write for booklet, "DREW FATTY ACIDS" and copy of Drew's new chart, "OILS AND FATS".

TECHNICAL PRODUCTS DIVISION

E. F. DREW & CO., Inc.

15 East 26th Street, New York 10, N. Y.

CHICAGO PHILADELPHIA BOSTON

DREW PRODUCTS

Deep Tone Cleaner softens even the hardest water making it naturally soft. This product cleans your floors and leaves them soft, pliable, bright, shiny as well as protected from dirt and grime. Deep Tone Cleaner is easy and economical to use. A few ounces clean any surface without harm.

For complete information, write today

REGIONAL WAREHOUSES IN:
Los Angeles • San Francisco • Denver • Seattle • Atlanta • Dallas

T.F. WASHBURN COMPANY

2244 Elston Avenue, Chicago 14, Illinois

stops the eye . . . starts the sale

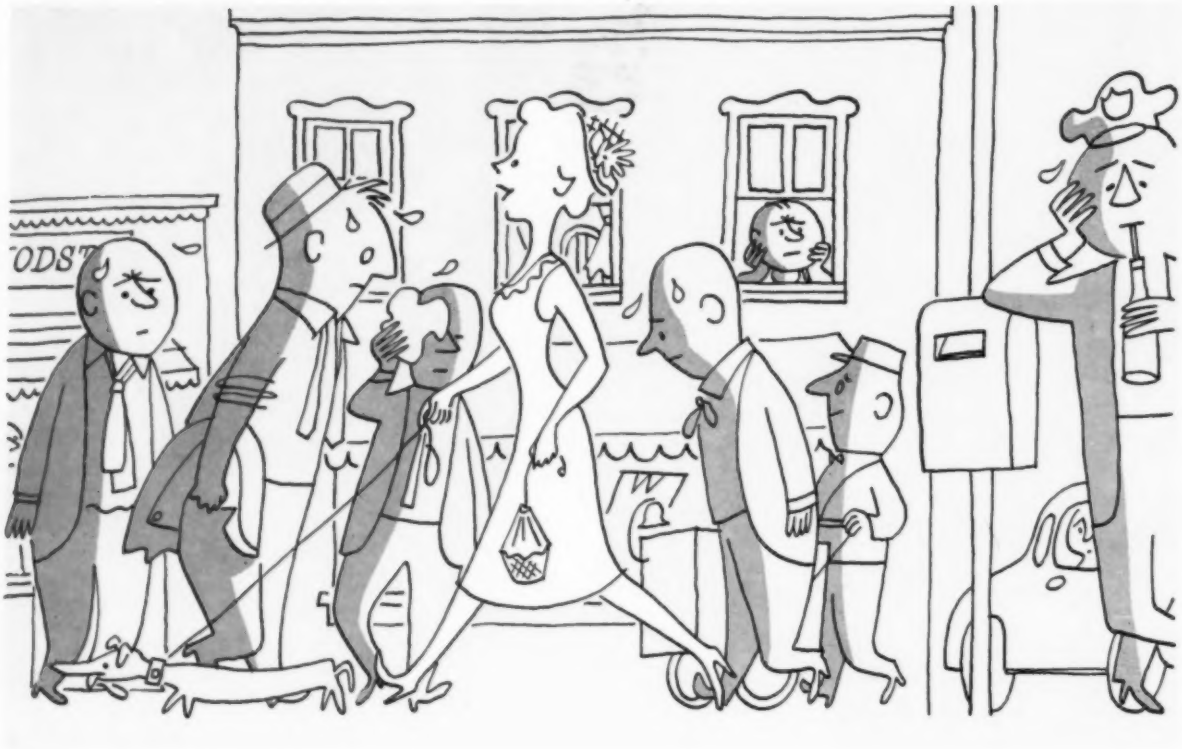
pack to attract in maryland blue

Here is true double-take packaging. It stops the busiest shoppers . . . stops their eyes and starts the sale. It's double-duty packaging, too. Acts as a strong, practical container and as a powerful advertising, merchandising and selling tool. Maryland Blue Glass makes your product stand out and shout "Buy Me!" So follow the lead of many famous brands . . . pack to attract in Maryland Blue. Write for samples today.

MARYLAND GLASS CORPORATION • BALTIMORE 30, MARYLAND

also available in clear glass

When she makes it a rule to look cool



Norda helps

Women are smart in the summer. They are ladies of quality. They find relief from summer sultriness in quality toiletries.

Fine cologne is a summer stand-by. It picks up and perks up her spirits. Even on the most drooping days, cologne keeps her "fresh at four."

A woman knows, too, that summer really tests a perfume. She likes the fine freshness of floral scents. She knows that a summer evening needs a perfume of subtle lightness.

Norda creates fine perfume compounds that are wonderfully right for summer. They are the basis for outstanding successes among the quality perfumes, colognes, and other toiletries most popular every summer.

Norda was the first ever to tell you, repeatedly, that good scents mean good sales. Send for samples that will convince you of Norda quality.

Norda ESSENTIAL OIL AND CHEMICAL COMPANY, INC.
601 West 26th Street, New York 1, N. Y.

CHICAGO • LOS ANGELES • SAN FRANCISCO • DALLAS • MONTREAL • TORONTO • HAVANA • LONDON • PARIS • GRASSE

After Closing . . .

Lever Names Brand Aides

Appointment of Warren Fales and Carl E. Rogers as assistant brand advertising managers in the Lever division was announced recently by Lever Brothers Co., New York. Mr. Fales was formerly with Doherty, Clifford, Steers and Shenfield, advertising agency, where he had been an account executive for five years. Earlier, he had been associated with the National Biscuit Co. He is a graduate of Kent School and Princeton University. Mr. Rogers was director of merchandising for the Waxed Paper Institute, Chicago, for three years before joining Lever. He is a graduate of the University of Texas.

C-P Suit Upheld

Objections of Warehouse Local Six, ILWU, to a $584,000 damage suit filed against the union by Colgate-Palmolive Co., Jersey City, N. J., were overruled by Superior Court Judge Albert C. Wollenberg in San Francisco, recently. The court placed the action on its calendar for trial.

Colgate-Palmolive Co. is seeking the damages for an alleged illegal slowdown by union members at the company's Berkeley plant a year ago. The asserted slowdown occurred prior to a long strike at the plant.

Synthetic Detergents Climb

Sales of synthetic detergents continued to climb during the first quarter of 1953 and now represent 53 percent of the industry's total soap and synthetic detergent sales, it was announced recently by the Association of American Soap & Glycerine Producers, Inc. The Association issues the report based on quarterly figures submitted by 84 member companies. Sales of soaps and synthetic detergents for the three months ended March 31 totaled 901.4 million pounds, and were up 9.4 percent over the fourth quarter 1952, and 5.4 percent ahead of the first quarter of last year.

Reported sales of soaps only, solid and liquid, for this first quarter amounted to 426.2 million pounds, and were up 1.4 percent over fourth quarter 1952, but 14.9 percent under the first quarter last year. Total synthetic detergent sales, solid and liquid, were 475.1 million pounds, an increase of 17.7 percent over the preceding quarter and 34.2 percent ahead of the first quarter 1952. Dollar sales of all soaps and synthetic detergents for the first quarter this year compared with the preceding quarter and the same period a year ago showed increases of 11 percent and nine percent, respectively. Dollar sales of soaps only, solid and liquid, were up 5.3 percent over preceding quarter. Dollar sales of synthetic detergents were up 17 percent over fourth quarter 1952.

Sales reported by AASGP members in the first quarter of 1953 are:

	Pounds		Dollars
Soaps other than liquid	416,450,000		83,550,000
Liquid soaps	1,223,000	gal.	1,713,000
Bar toilet soaps	117,117,000		33,663,000
White laundry bar soap	49,909,000		8,306,000
Laundry bars—yellow and other	18,481,000		1,617,000
Soap chips and flakes—packaged	19,493,000		5,195,000
Chips and flakes—bulk	35,307,000		3,090,000
Granulated, powdered & sprayed	150,315,000		25,611,000
Washing powders—packaged	2,581,000		213,000
Washing powder—bulk	6,713,000		454,000
Hand or mechanic—paste & powders	3,973,000		489,000
Pastes and jelly	6,891,000		846,000
Shaving soaps	2,415,000		1,579,000
Shaving cream	2,109,000		2,275,000
Miscellaneous or "other" soaps	1,104,000		212,000
Liquid soaps—other than packaged shampoos	1,165,000	gal.	1,367,000
Packaged liquid shampoos	58,000	gal.	346,000
Solid synthetic detergents	457,517,000		97,308,000
Liquid detergent shampoos	1,960,000	gal.	3,012,000
Liquid synthetic detergents	2,204,000	gal.	6,409,000
Solid detergent shampoos	5,387,000		3,244,000

CSMA Issues Proceedings

The Chemical Specialties Manufacturers Association recently announced publication of the proceedings of its 39th annual meeting, held at the Hotel New Yorker, New York, December 8 and 9, 1952. One copy of the 184-page paper covered book is being sent free to each member company and each speaker on the program of the meeting. Additional copies are available from the association at $7.50 each in the United States and $8.00 in foreign countries.

Cos. Chems. Honor Mayhem

The Society of Cosmetic Chemists conferred honorary membership on Stephen L. Mayhem, executive vice-president, Toilet Goods Association, at its semi-annual meeting, held recently at the Hotel Biltmore, New York. Thomas R. Farrell, editor of *Drug and Cosmetic Industry*, delivered the testimonial address honoring Mr. Mayhem, and Maison G. de Navarre paid him a personal tribute outlining his long standing relationship with the new honorary member.

The papers presented at the meeting included "Toxicity Studies on Actamer" by H. A. Shelanski and M. V. Shelanski, Industrial Toxicology Laboratories, Philadelphia. The authors described acute oral toxicity studies on white rats and guinea pigs with "Actamer," a germicide produced by Monsanto Chemical Co., St. Louis, per se in a suitable solvent and soap containing "Actamer," and soap controls. Eye irritation studies with "Actamer" per se and "Actamer" in soap were also reported. Subacute toxicity studies by percutaneous absorption on a ninety-day basis were outlined on varying dosages in a suitable solvent and pathologic studies were made. Patch-test studies with "Actamer" per se in a suitable solvent, as well as soap containing "Actamer," and control soaps are reported according to the Draize and Shelanski repeated insult method.

Helen E. Wassell, organic syn-

thesis fellowship of Carbide and Carbon Chemicals Co., Mellon Institute, speaking on amine soap hair shampoos said that there was a trend towards return to modified soap-based shampoos. She described chemical and physical properties of ethanolamine soaps, stressing their suitability for use in shampoo formulation. According to Miss Wassell preparation of amine soap shampoos is easy. She outlined a simplified production-control method, supplied a basic shampoo formula, and suggested various additives for modification of viscosity and lathering properties, for improvement of hard water toleration and color in amine soap shampoos.

Other papers presented included "Hair Loss in Humans and Some of Its Chemical Aspects", by Irving L. Milberg, New York University-Bellevue Medical Center; "The Need for Scientific Data in a Cosmetic Patent Program" by Thomas Cifelli, Jr.; "Some Infrared Applications to the Analysis of Cosmetics and Essential Oils" by Harry Hausdorff, Perkin-Elmer Corp., Norwalk, Conn.; "Pigmentation of the Skin" by Sidney G. Clyman, New York University-Bellevue Medical Center; "Experimental Analysis of the Psychological Properties of Cosmetics" by Dean Foster, United States Testing Co., Hoboken, N. J.; and "Application of the Biological Sciences to Cosmetics" by Lloyd W. Hazleton, Hazleton Laboratories, Falls Church, Va.

SAACI Golf Outing

The Salesmen's Association of the American Chemical Industry will hold its first golf outing of the season June 23 at the Bonnie Briar Country Club, Larchmont, N. Y., Mike Testa, chairman of its golf committee announced recently. Golfers will be able to tee-off any time during the morning or afternoon. A buffet luncheon will be served from 11:30 a.m. to 1 p.m., while dinner is scheduled for 7 p.m. Price for members is $17.50, guests, $18.50. The second golf outing is scheduled to be held on July 14 at the Huntington Crescent Club, Huntington, L. I.

As the Reader Sees It . . .

Answers Vaporizer Editorial

Editor:

In the editorial in your May issue dealing with the statement of the Interdepartmental Committee on Pest Control recommending against the use of insecticide vaporizers in living quarters you say that the committee has powers to go much further if its recommendations are not heeded. This statement is not only erroneous, but an unfortunate threat to our distributors and dealers. This Committee was organized in 1946 by officials of the constituent agencies on invitation of the Secretary of Agriculture to co-ordinate the research, development and other activities of the Federal Agencies in pesticide work. It is without statutory authority, and by making public pronouncements, encroaches on the responsibilities charged by statute to the Department of Agriculture and the United States Public Health Service.

Manufacturers and formulators of pesticides know all too well the difficulties confronting them in getting clearance for new products and applications from the responsible authorities. To introduce a new agency, self constituted and devoid of legal responsibility and authority, into the Washington picture, leads only to chaos.

As your editorial points out "the word 'misuse' emphasizes the aspect of human carelessness or ignorance." I have tried unsuccessfully to find out what specifically were the hazards of misuse about which the Committee was concerned. We believe that our label adequately covers all such potential hazards, and that "Bug-Bulb" offers less of a potential hazard through misuse than many long established items used by the public.

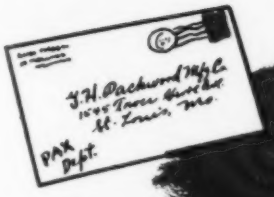
In evaluating the usefulness and beneficial effects of pesticides, there is unfortunately little effort made to acquaint the public with the facts, which are startingly favorable to chemicals used as pesticides. Although lindane, the material vaporized in almost all units, has been in commercial use on an extensive basis for about three years, there is but one accidental death attributed to its use or misuse. The relatively few cases of allergy and temporary illness compare with millions of persons who have been exposed to lindane in various forms and formulations, including vapors.

When this record is compared with other commonly used chemicals, the contrast is notable. Vital statistics published by the Federal Security Agency for one year, 1949, show that aspirin was responsible for 70 accidental deaths, lye and similar chemicals for 87, kerosene and other petroleum products for 117, and barbituric acid and derivatives for 466. (See Knipling: "The Greater Hazard—Insects or Insecticides"—*Journal of Economic Entomology*, February, 1953.)

The remarkable record of the safe use of pesticides is relatively unknown to the general public. Credit for this record, in part, certainly belongs to the operation of the Federal Insecticide, Fungicide and Rodenticide Act. The public should be informed of this record and of that fact that it is protected by such a law; that great care is taken both by manufacturers and government officials to see that instructions and cautions on the labels of economic poisons are clearly stated to guard against hazards of use and misuse, that it is important to follow instructions carefully in using pesticides.

Such an approach by governmental authorities, it would seem to me, would be more constructive and in the interest of public health than implying, as the Committee statement does, that the public is too stupid or ignorant to read and follow instructions.

Joseph A. Moran, president
American Aerovap, Inc.
New York, N. Y.



"...his hands are getting dirtier every day."

PAX DAILY FAN MAIL

BELOW IS REPRODUCED THE FULL TEXT OF A LETTER RECEIVED JUST A SHORT TIME AGO.

"Gentlemen:

I have a problem, my part time man who is a full time mechanic at the Community Traction Company here in Toledo, absolutely refuses to use any other than PAX* for his hands – I can't have him going around with dirty hands – so I called the purchasing agent for the Community Traction Company and learned from him that you are the makers of this wonder soap –

So please tell me who is your local distributor for the Toledo area. Or will I have to buy it directly from you."

Sincerely, Tom Rose
Tommy's Sunoco Service
Dorr at Upton, Toledo 7, O.

P.S. Please hurry the information as his hands are getting dirtier every day.

*PAX • LANO • SAV Heavy Duty

This is just one of the many thousands of unsolicited "Fan Letters" received continually by the makers of PAX-LANO-SAV Heavy Duty. Gratifying as these letters are to receive, even more gratifying is the ever increasing volume of mail containing the orders for the millions of pounds of PAX industrial skin cleansers that go out to all corners of America. This is the kind of "Fan Mail" that has built PAX-LANO-SAV Heavy Duty into the largest-selling of all industrial skin cleansers.

User loyalty of this kind is the reason why jobbers everywhere are finding the PAX line is one of their most profitable.

PAX • LANO • SAV HEAVY DUTY

GRANULATED INDUSTRIAL SKIN CLEANSER

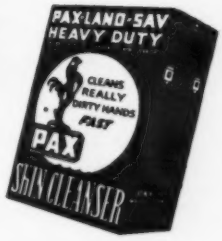
LOOK for the PAX ROOSTER

Your Assurance of Quality Products.

PAX-LANO-SAV Heavy Duty Granulated Skin Cleanser has been awarded the Seal of Acceptance of the Committee on Cosmetics of the American Medical Association.

ACCEPTED COMMITTEE ON COSMETICS AMERICAN MEDICAL ASSOCIATION

LET US PROVE PAX IN YOUR WASHROOM write today on your letterhead for a free half pound sample of PAX-LANO-SAV Heavy Duty Granulated Skin Cleanser. Try it out in your own office or warehouse washroom . . . you'll find that nothing matches PAX — in performance or profits.



PAX

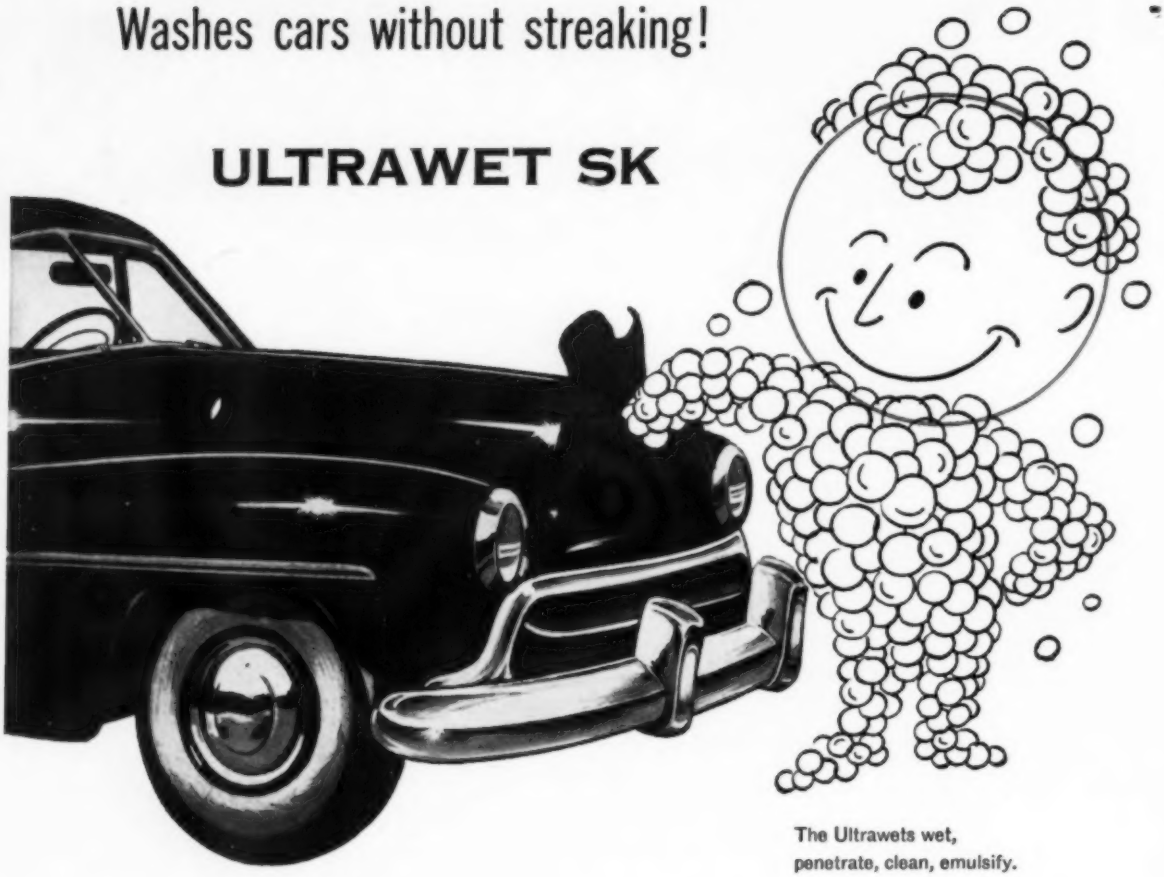
When you specify any PAX product you get as an extra dividend the experience and ability of PAX technicians acquired through over a quarter of a century of continuous research and development.

53-F

G. H. PACKWOOD MANUFACTURING CO.
1639 TOWER GROVE AVE. ST. LOUIS 10, MO.

Washes cars without streaking!

ULTRAWET SK



The Ultrawets wet, penetrate, clean, emulsify.

Here's a quality car wash that can be repackaged and sold, as is — without mixing with other ingredients. And just look at this list of important selling features:

NON-STREAK — Low alkalinity assures minimum effect on waxed surfaces and no chance for solids to cling to finish after the rinse-off — even on maroon finishes.

GOOD APPEARANCE — ULTRAWET SK is a white odorless bead that handles easily and doesn't cake.

INSTANTLY SOLUBLE — ULTRAWET SK dissolves instantly to give copious suds in hard or soft water, hot or cold.

TWO DENSITIES — Available as ULTRAWET SK Regular or ULTRAWET SK High Density. Choose the one to fit your packaging requirements.

Look into the greater sales possibilities of ULTRAWET SK for your car wash brand. We'll be glad to help you get started. For details, just send coupon below, or write.

ATLANTIC
PETROLEUM
CHEMICALS

THE ATLANTIC REFINING COMPANY
Dept. E-51-1, Chemical Products Sales
260 SOUTH BROAD STREET, PHILADELPHIA 1, PA.

Please send me information about ULTRAWET SK for use as car wash.

*Name*_____

*Firm*_____

*Street*_____

*City*_____ *State*_____

Philadelphia, Providence, Charlotte, Chicago
In the West: L. H. Butcher Co.
In Canada: Naugatuck Chemicals Division of Dominion Rubber Company, Ltd.

SWEEP DUST FROM AIR-FURNITURE-FLOORS

with entirely different SANITREET--the anti-static, non-oily dust absorber mist that can't burn!

• CLEANS THE AIR
• CLEANS THE SURFACE
• FRESHENS THE ATMOSPHERE

● New principle . . . new product!

Dust particles are suspended in the air by their lightness and static charges.

Spray the SANITREET Dust Absorber Mist lightly throughout the air. Its penetrating and anti-static action speeds settling of airborne dust particles.

The atmosphere instantly becomes refreshingly pleasant.

Floors are thoroughly cleansed of all settled dust when swept with the SANITREETed dust mop or yarn brush.

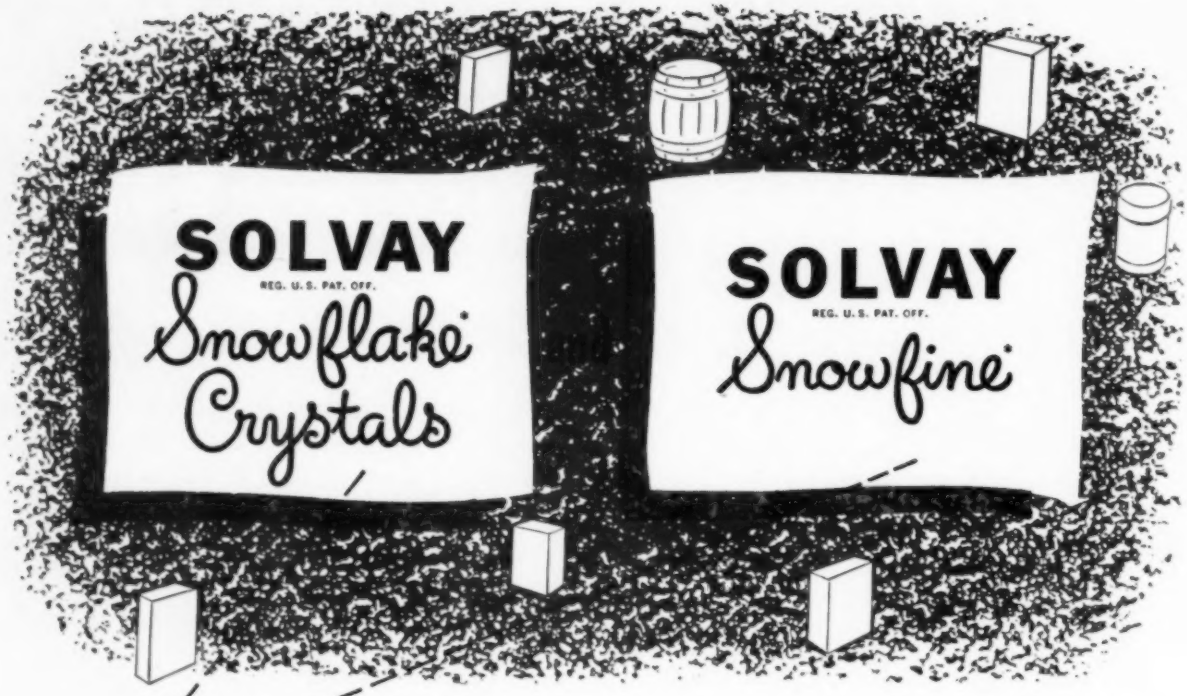
Furniture and woodwork are wiped dustfree quickly with a SANITREETed dust cloth.

Air and surfaces remain *clean* and *fresh longer.*

Safe to use! Will not burn. Contains no animal, mineral, vegetable oils or wax. It will not stain . . . for SANITREET Dust Absorber Mist is soluble in water.

CHEMICAL SERVICE OF BALTIMORE, INC.

HOWARD AND WEST STREETS, BALTIMORE 30, MD.



the Superior Sesquicarbonate of Soda that will

REDUCE THE END COST OF YOUR COMPOUNDS

Compounders and Repackers will find that either of these quality Solvay products—Snowflake Crystals or Snowfine—is an ideal component of cleaning compounds. This true sesquicarbonate of soda is available in two grades, to fit the granulation of your product—crystals (Snowflake Crystals) and fines (Snowfine)—and offers you all these advantages:

- Beautiful appearance—snow-white, crystalline
- Mildness—low pH
- Quick-dissolving . . . non-caking . . . free-flowing
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- Ability to mix with and reduce end cost of other components

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Soda Ash • Caustic Soda • Chlorine • Potassium Carbonate • Calcium Chloride • Caustic Potash • Sodium Bicarbonate • Ammonium Bicarbonate
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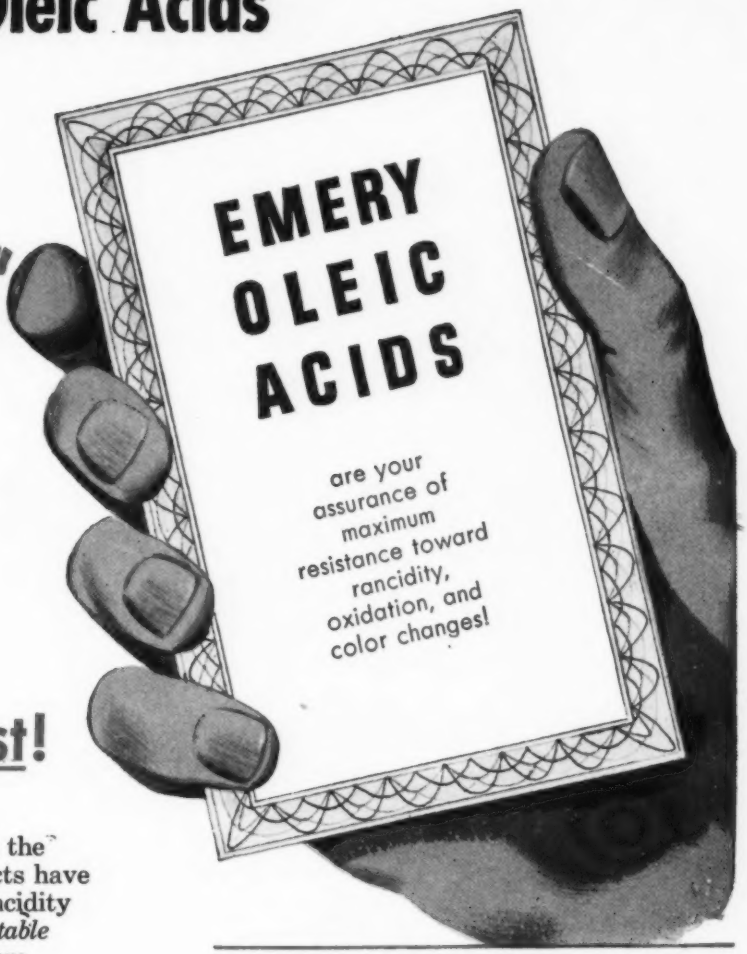
Use Emersol® Oleic Acids

and have "STABILITY INSURANCE" for your products at no extra cost!



What is "Stability Insurance"? It's the satisfaction of knowing your products have the maximum resistance against rancidity during storage and use. And since *stable* Emersol Oleic Acids cost you no more, why take extra chances with rancidity, oxidation, or color darkening, during processing or in your finished product. This extra product-assurance is why more and more manufacturers are replacing ordinary oleic acids with *stable* Emersol Elaines.

All of the Emersol Elaines, including single and double distilled grades, possess unusual stability. Emersol 233 L.L. Elaine (low-linoleic) is the purest, most stable commercial oleic acid available.

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☐ Specifications on Emersol Elaine

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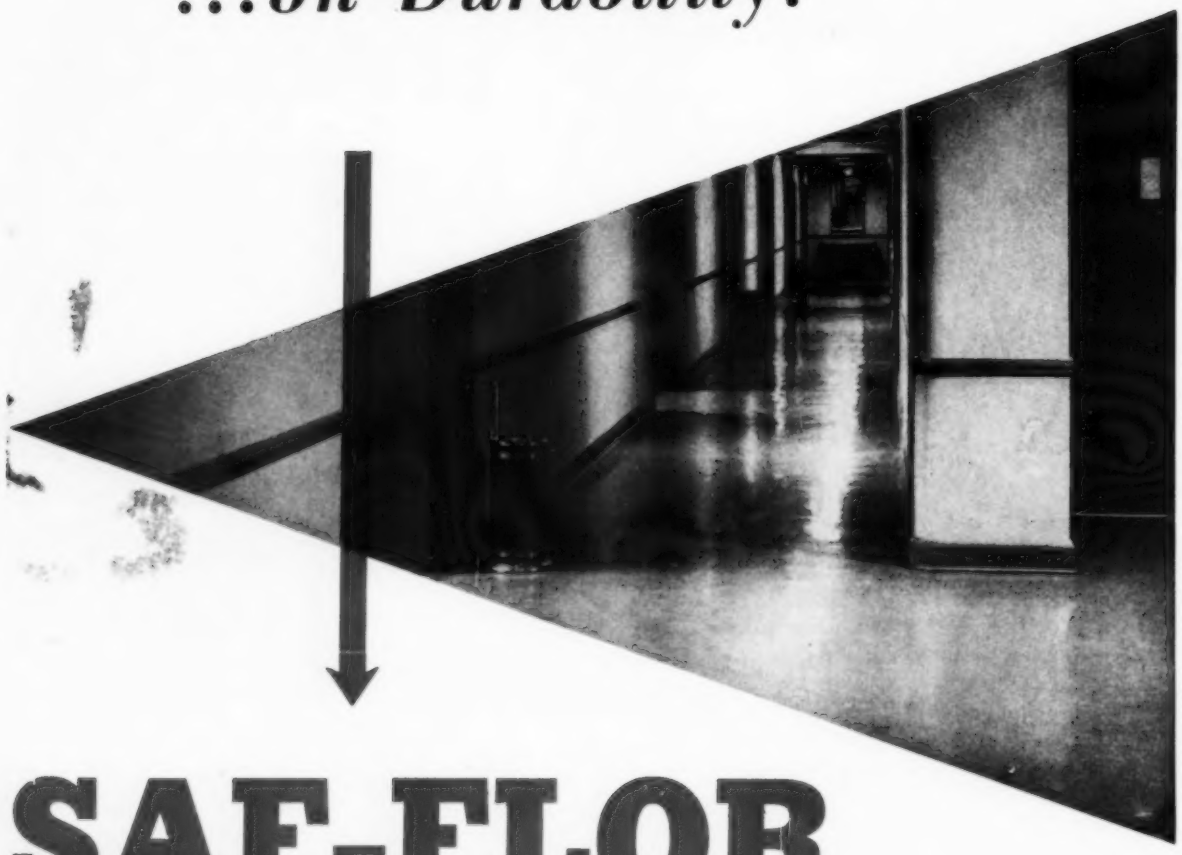
Emphasis on Safety!
...on High Gloss!
...on Durability!



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. . . a new anti-slip floor wax

Have you tested a sample of this new anti-slip, high-gloss floor wax? If not, let us send you a sample today!

An entirely new safety wax based on a special patented copolymer. Water resistant in 12-24 hours. Easy to apply and remove. Withstood damp mopping for 25 consecutive days. Freezing does not impair gloss more than 10%.

Available to the trade under SAF-FLOR label or your own private brand. For full information, write to

SHAWMUT SPECIALTY COMPANY
315 Centre Street **Boston, Mass.**

NEW CHAPTERS IN AN OLD STORY*

From knowledge gained by long experience, Niagara is constantly adding new chapters to the continued story of chemicals in industry.

NIALK® Caustic Soda

Unsurpassed for purity, quality and uniformity, NIALK Caustic Soda is widely used in the production of all types of soaps and detergents by the newest, most efficient techniques.

Strict production standards plus continuing application studies have earned for this NIALK product—as for every NIALK product—industry's unqualified acceptance.

NIAGARA ALKALI COMPANY

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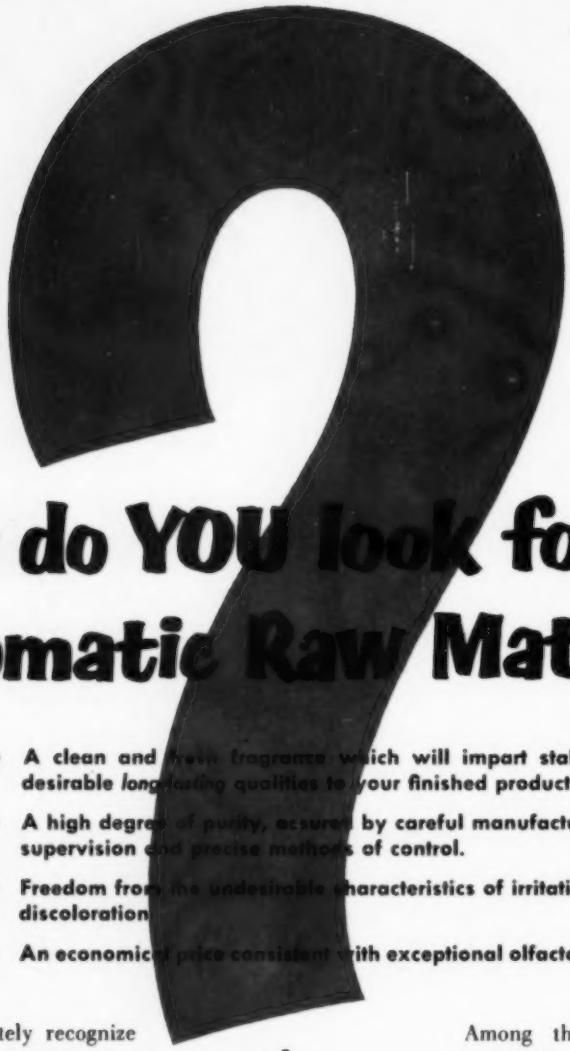
NIAGATHAL® (TETRACHLORO PHTHALIC ANHYDRIDE)



What do YOU look for in an Aromatic Raw Material

- **A clean and fresh fragrance which will impart stability and desirable *long-lasting* qualities to your finished product.**
- **A high degree of purity, assured by careful manufacturing supervision and precise methods of control.**
- **Freedom from the undesirable characteristics of irritation or discoloration.**
- **An economical price consistent with exceptional olfactory value.**

The perfumer will immediately recognize these qualities in VERONA aromatic raw materials—*elusive qualities* which long experience has enabled us to capture and pass on to the perfumer for use in building aromas for finished cosmetics, soaps, toiletries and allied preparations.

VERONA raw materials have proven themselves in countless applications—proven their value at the *point-of-sale* where customer appeal is all-important.

Among the many fine VERONA raw materials, note the following outstanding products:

CYCLAMAL VERONOL RESEDALIA FLORANOL
THE IONONES CUMIN KETONE JACINTHAL

Sole representatives in the United States for J. & E. SOZIO, Grasse, France

NATURAL ABSOLUTES ESSENTIAL OILS RESINOIDES

Write us on your Company letterhead for our complete catalog.

USE VERONA PRODUCTS TO BUILD SALES FOR *Your* PRODUCTS

AROMATICS DIVISION
VERONA CHEMICAL COMPANY

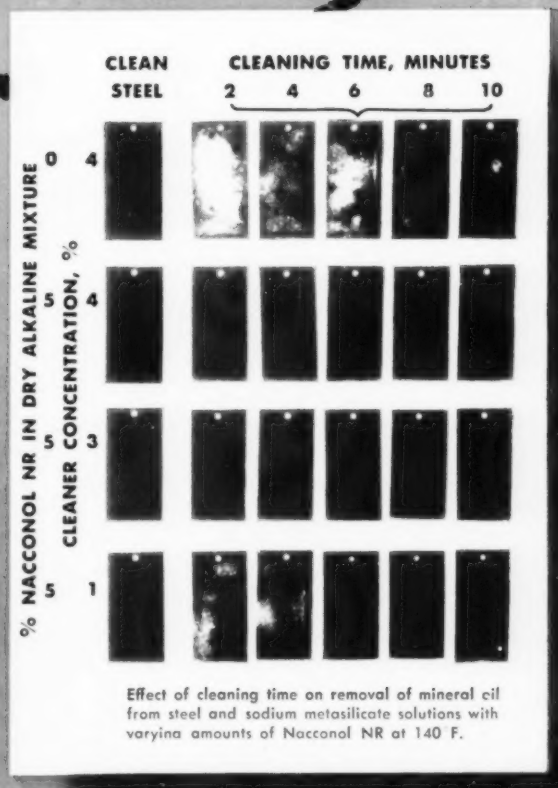
26 Verona Avenue, Newark, N. J. 208 North Wells Street, Chicago, Ill.

To get STEEL clean in 1/4 the time

there's nothing like

Nacconol*

in alkaline mixtures



Effect of cleaning time on removal of mineral oil from steel and sodium metasilicate solutions with varying amounts of Nacconol NR at 140 F.

As the luminogram below clearly shows, a small amount of Nacconol added to an alkaline cleaner degreases steel in a fraction of the time required with an alkali alone.

Practical experience confirms the scientific evidence presented here. Nacconol's powerful boost to the detergency and emulsifying power of alkaline-degreasing mixtures has been the basis of many sales successes.

With Nacconol you can improve the efficiency and cut the cost of metal cleaning compounds in these four ways: Lower alkali concentration. Lower operating temperatures. Complete removal of oil residues, even in hard water. Shorter immersion time.

Get our Technical Bulletins which give test results with various Nacconol-alkali mixtures on various metals. They may suggest ways to increase your sales to the metal-working industries. Write or phone our nearest office.

NATIONAL ANILINE DIVISION

ALLIED CHEMICAL & DYE CORPORATION

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Luminograms are photographs made with ultraviolet light, under which mineral oil fluoresces brightly. Thus, traces of mineral oil invisible to the naked eye show up as white or grey areas in a luminogram. Perfectly clean steel photographs jet black.

Allied Chemical

Propylene glycol U.S.P., produced by Carbide since 1931, plays many important roles in the Drug, Cosmetic, and Perfume industries.

PROPYLENE GLYCOL IN:

Drugs . . . More versatile than most generally used solvents, propylene glycol dissolves many pharmaceutically active substances. Consider it as your choice when preparing tinctures, solutions, and elixirs.

Cosmetics . . . Try propylene glycol in your cosmetic creams, lotions, and shampoos. This hygroscopic, water-soluble liquid enhances the softening action upon the skin and prevents "rolling" or drying out of the creams while in use, or in storage. In lotions and shampoos, propylene glycol couples the oil, lanolin, and soap in water.

Perfumes . . . An excellent solvent for most perfumes, propylene glycol allows a rapid and complete dispersion of ingredients throughout the preparation.

Whatever your use, propylene glycol from Carbide and Carbon will give top performance at your command. For further information write for your copy of the "Emulsions Booklet," (F-4186). Offices in principal cities. In Canada: Carbide and Carbon Chemicals, Limited, Toronto.

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CHEMICALS

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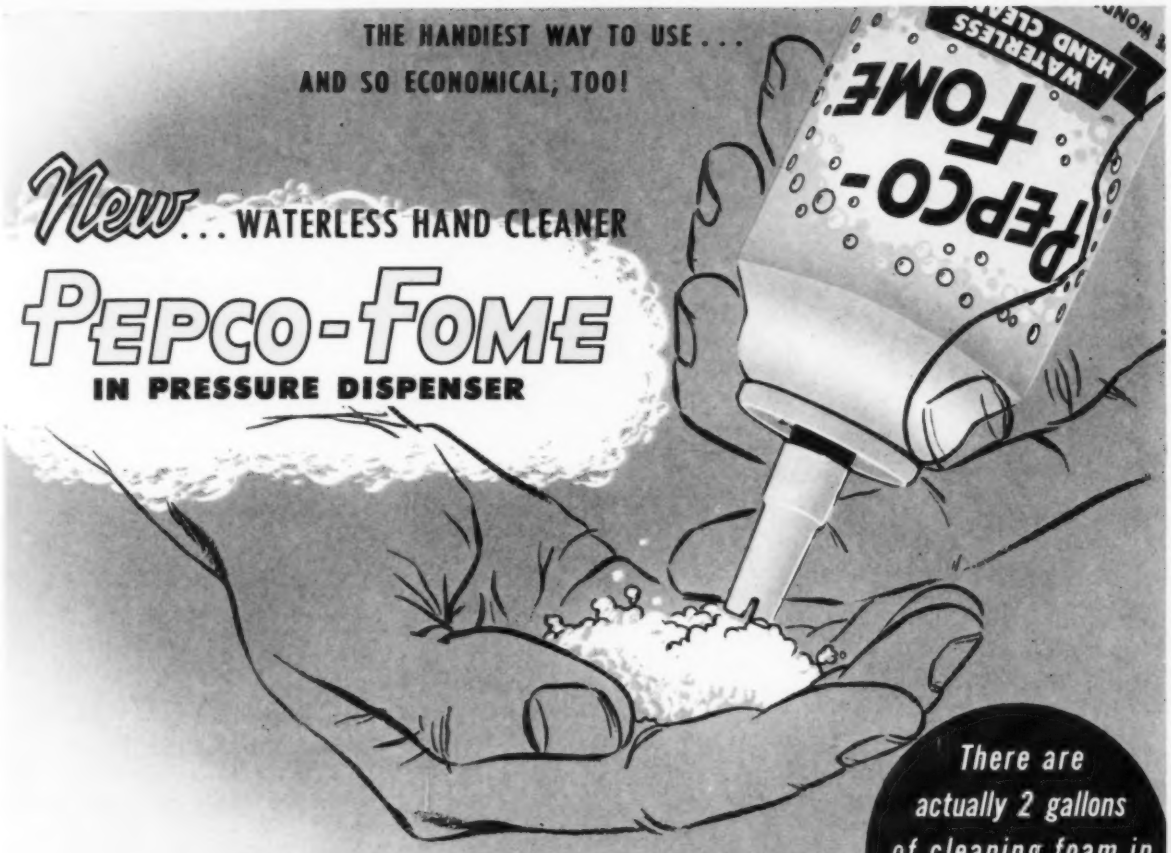
THE HANDIEST WAY TO USE . . .
AND SO ECONOMICAL, TOO!

New... WATERLESS HAND CLEANER

PEPCO-FOME

IN PRESSURE DISPENSER



There are actually 2 gallons of cleaning foam in this little hand-size pressure can.

Special Aerosol dispenser keeps this effective cleanser handy, ready to use. Gentle thumb pressure spreads pleasantly scented PEPCO FOME that cleans away heavy grease and soil. More than 100 hand cleanings in this one little can.

OTHER FAST SELLING HAND CLEANERS

Pepco #415

Lifts dirt by dissolving it. Non-abrasive. Coolest, most soothing cleanser. Contains Lanolin.

Pepco #418

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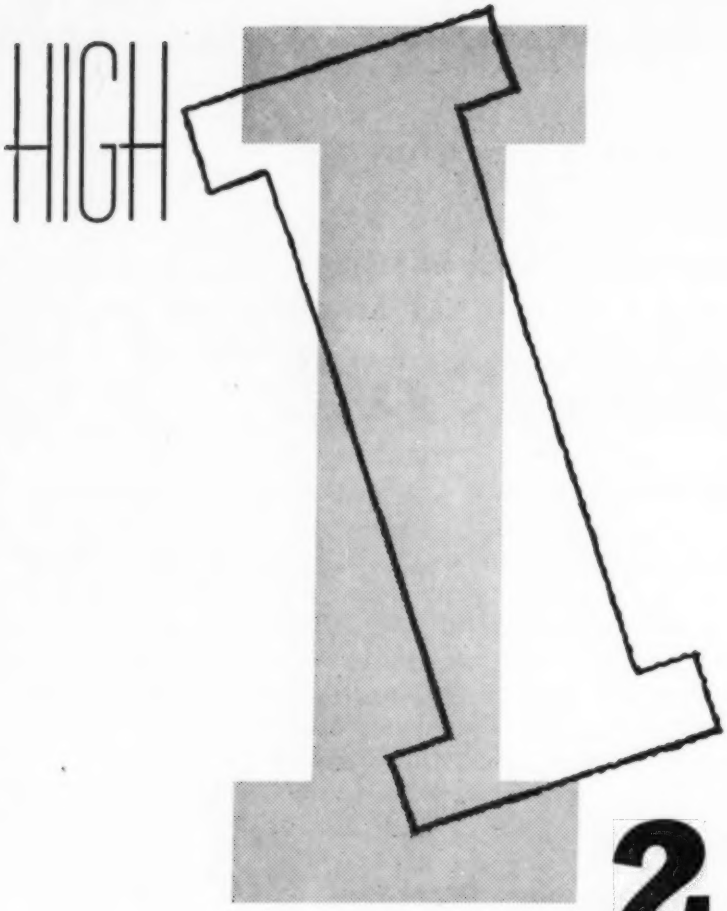

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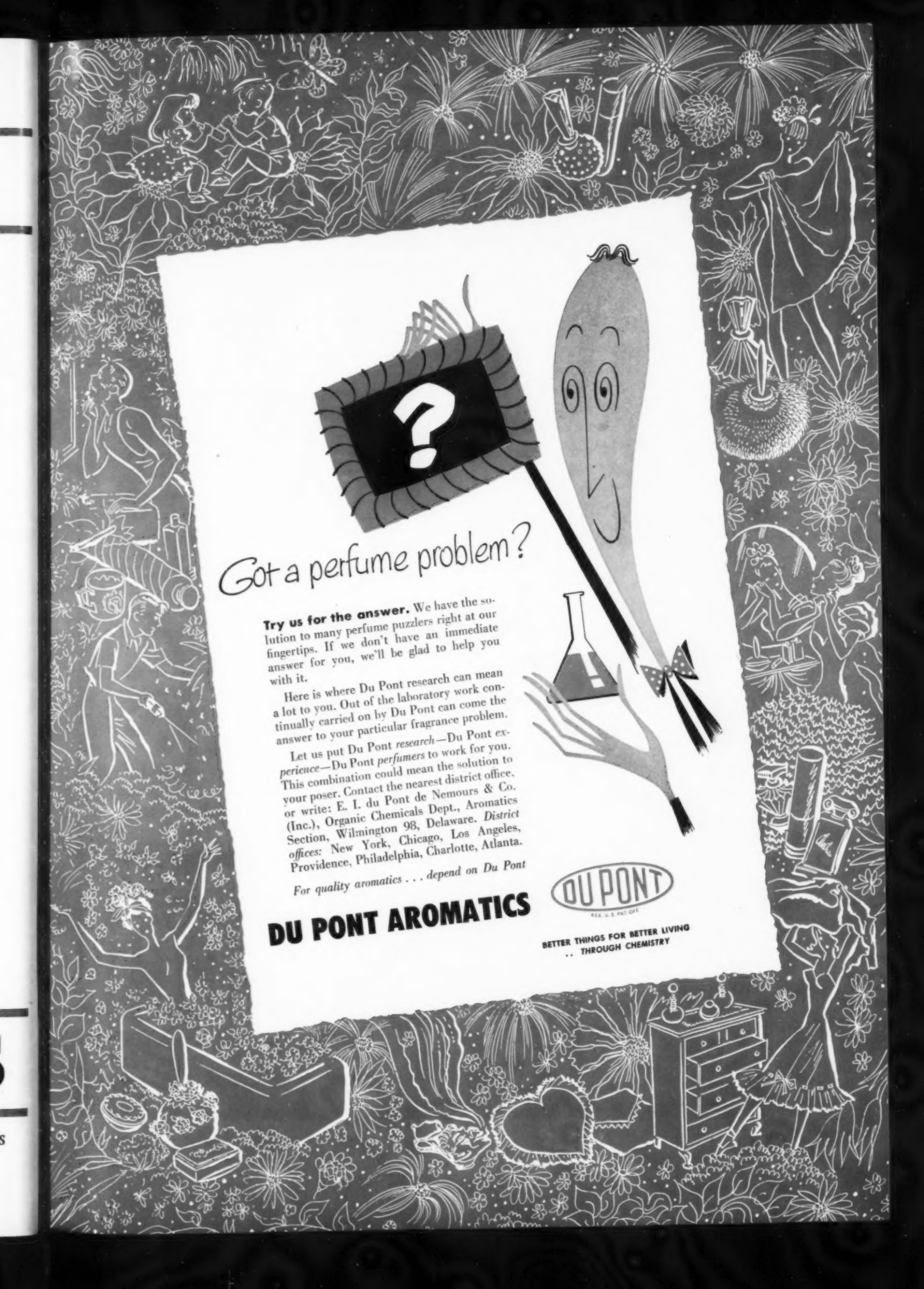

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. . . in brief

as the editor sees it . . .

DETERGENTS . . . As per predictions, synthetic detergents now command about fifty-three per cent of the household "soap" market. Fewer and fewer straight soap products for home laundry use and general cleaning are found on dealers' shelves. It so happens that those products most widely advertised and sold by the leading soapers of late have been synthetics or combinations thereof. The sales pressure has been behind the synthetics. Where large soapers market both soaps and detergents, the former have been receiving relatively minor advertising attention, in some cases little or none.

Actually, the public has no idea what it is buying to wash the dishes and the old man's overalls. Probably it doesn't care too much as long as the washing compound gets out the dirt and does not dissolve the household plumbing. But the straight soap fellows are beginning to show some spunk. Watch them point the dermatitis finger at the synthetics, the "chemicals," in the months to come. Watch them become rough and tough. And don't think that the detergent-soap battle is over by a long shot, even though synthetics have fifty-three per cent of the market and are still moving up.

•

SOAP CLEANS . . . Opening guns in the campaign of the National Renderers Association to sell more tallow and grease for industrial uses have already been fired. Through research and publicity, according to Frank B. Wise, secretary of NRA, the industry plans to reduce the ever-growing surplus of inedible fats by seeking new uses and by expanding old uses from present reduced levels. Inasmuch as soap always has been the chief outlet for inedible fats, first attention is being given to this phase of the market. The renderers have come up with a slogan, "soap cleans best for less," which obviously is aimed at the growing demand for synthetic detergents.

In its search for new uses for tallow and greases, the Renderers Association will have the full cooperation of the Department of Agriculture. Already the latter has come up with a method for using tallow in place of palm oil in terne plate manufacture and other metal coating operations. New developments based on fatty acid and higher fatty alcohol derivatives will receive considerable attention. More aggressive attempts to regain markets lost to synthetics will be undertaken. Where the synthetics are concerned, we imagine that the renderers will not spare the whip, although conceivably sulfated tallow acid derivatives may yet become paramount raw materials in this field.

The renderers have come up and are back in there punching. We could see some excitement in the months ahead.

•

LABELS . . . That the American public is addicted to the bad habit of not reading labels and instructions for use is no secret to anybody. It's just a plain fact. And all the fancy-dan plans to make them read before using invariably come out the small end of the horn. Various and sundry stunts have been tried, but Mrs. McGuff still uses the stuff first and reads later, if she reads at all. As we have noted upon occasion, most of the time we don't blame her. Everything except the kitchen sink is crowded on a label and the important part too often ends up in six point type readable only by those gifted with exceptional eyesight. Thus it has gone down

through the years. People just don't read labels.

But people do look at funny pictures, or a dramatized version of anything. They will read jokes and the funnies, but not plain labels. So, let's combine them, noted the Hollingshead folks down in Camden, N. J. This they did and have come up with a label idea, especially suitable for use on hazardous products, based on a cartoon character known as "Safety Sam." On each label is the wording, large enough to be read easily, "Safety Sam Says:", followed by warning and directions. For most sanitary chemicals and allied specialties, the idea might be the answer for the no-read user. Every time a label is read carefully, a potential law suit is eliminated.

•

RESISTANCE . . . Fly resistance to DDT and other chlorinated insecticide materials has been one of the most serious problems confronting the industry since DDT was first used. Projected by some entomologists, it bade fair to eliminate all chlorinated hydrocarbons as insecticides in due time. But, according to word by Dr. Ralph L. Metcalf of the University of California, the insect resistance problem may be licked. A study of the biological mechanics of insecticide resistance and a determination of just what resistance is, may bring forth a solution. When we consider what this can mean, not only to the insecticide industry, but to the whole world of insect control and public health, the importance of Dr. Metcalf's work stands out like a beacon in the night. Up until this latest word, we were not alone in viewing insect resistance as the eight-ball with the insecticide industry standing squarely behind it.

•

LIABILITY . . . A manufacturer of soap is liable for injuries sustained by a user because of a piece of wire imbedded in a soap bar. This is according to a recent decision by the Ohio Court of Appeals in the case of Kruper versus Procter & Gamble. Because the court decision in this case conflicts with one handed down by another Ohio court in a similar case, Mali versus Colgate-Palmolive-Peet Company, the record has been certified to the Supreme Court of Ohio for final review.

Two rather surprising holdings by the court in this latest case make it appear a bad precedent for the soap industry, according to Sellers & Conner, Washington attorneys and authorities on product liability. The first is that the manufacturer was held liable on the ground of negligence although there was no evidence of negligence. The court held that the presence of the wire in the soap raised a presumption of negligence.

The second curious angle in the case is that liability for breach of warranty was sustained although there was no privity of contract between the manufacturer and the user since the soap was purchased through an independent outlet. Usually, in a case of this nature, a manufacturer is liable only where he had direct contractual relationship with the party bringing suit.

As might be suspected, this latest decision against the soap firm sustained an initial jury verdict in the case. The eventual review by the Ohio Supreme Court will be awaited with keen interest, as not only every soaper, but numerous other manufacturers and marketers of household products could have much at stake.

•

LABELING . . . If a manufacturer does not label his product to cover all contingencies, he may be sued and damages collected. At least that was the idea in a recent Virginia suit for damages reportedly sustained by using an insecticide on fruit trees or the like where the conditions under which the material was used were not warned against on the label. The court held and the verdict was sustained on appeal that it is the duty of every manufacturer to label his product correctly and fully. The label warnings must cover all possible contingencies, it was maintained. The firm was sued under both the Federal and the Virginia Insecticide Laws,—the first suit of its kind since the original Federal Act was passed way back in 1910. Projected in various directions under these laws, there are serious implications for all manufacturers of disinfectants, fungicides, and the like, as well as insecticides. Surely, the position in which manufacturers in this field find themselves as time goes on, shows no improvement.

as the reader sees it . . .

Indian Soaper Replies

Editor:

We refer to the editorial dealing with the Indian Soap industry published in the issue of February, 1953.

We are sorry to have to say that your comments are unbalanced and call for correction. Your estimate that there is an overall objection against foreign soap enterprises in this country is not true. Foreign interests of the right sort, provided they play the game, have a place in our economy; but the sort of foreign competition we object to is the enterprise of international combines, who, because of their monopolistic policies and record have been supplanting instead of supplementing the indigenous industry.

Under the circumstances, your remarks regarding legislation against such interests are difficult to understand. If the U.S.A., which is an industrial colossus in comparison with this country, has found it necessary to legislate against trusts and international combines, it should not be difficult to understand why similar moves are contemplated in this country, particularly when it has been the declared aim of certain combines that their activities, wherever they operate, should cover 75% of the trade, which they do not consider full monopoly!

I would also like to correct any misconception that you may have regarding the quality of the indigenous production. Over a decade before the international combine came into the picture in 1935, indigenous enterprise could provide for the entire country at competitive prices and, furthermore, supply a quality of soap comparable to the best produced anywhere. It also has the most modern plants, and technological skill of a high order. Indigenous enterprise, therefore, is efficient in every respect except in terms of financial resources which the combine is utilizing unfairly to beat down competition everywhere. It may be illuminating for you to note that between 1948 and 1952 in this country it has increased its share of trade from 25% to 50% and plans are being formulated for expansion of its activities, when colossal indigenous capacity is lying idle.

Under the circumstances, Sir, your injunction to the indigenous soap industry to be patient and to imitate the more successful foreign competitors is gratuitous counsel without any significance.

We shall be obliged if this contradiction is given suitable publicity in your journal.

D. KESAVA IYER,
Hony. Secretary and Treasurer,
South India Soap Makers' Assn.
Perumanur, Ernakulam,
India

As we remember it, a decade or more prior to 1935 as mentioned by Mr. Iyer, when "indigenous enterprise could provide for the entire country at competitive prices," the annual per capita soap consumption of India was four ounces, the lowest in the world with the exception of China. Yes, our counsel was strictly gratuitous, but we are not so certain it was without significance.—Ed.

—— ♦ ——

Too Much Foam

Editor:

In view of the lead editorial in your April issue, alluding to the need for coconut oil to produce lather and foam, I thought you might be interested in reading the attached copy of a letter recently addressed by a 'weary washwoman' to the editor of a large mid-western daily paper. A clipping of the letter was sent to me recently by one of our members in that mid-western locality.

F. B. WISE,
Secretary-Treasurer
National Renderers Assn.,
Washington, D. C.

"Too Much Foam and No Soap

I've just fished my laundry out of a machineful of thick, slick, slimy mess, topped with mountains of foam. Ten tubs of rinse water brought out enough so that I could stand up the clothes in the yard to dry.

The markets are flooded with these "modern wonders" of science that suds and foam, and smell fragrant; do everything but clean.

They've built in sunshine, raindrops, detergent, bluing, perfume and more sudsing action. And slipped out all the soap.

The Almighty always did fine in providing sunshine and rainwater; also the sweetening ingredient, fresh air. We're not too lazy to pick up our bluing bottle. And, for gosh sakes, if they'd put some soap in the stuff it would make its own suds. No amount of foam atop the water and the clothes is going to clean them anyway.

Seems we're getting so doggoned modern we're heading back to the good, old days when we'll have to boil the clothes and make the soap. There are still the bar soaps left on the shelves, fortunately. Haven't bought any lately and bet a nickel by the time I get there it'll have built in music and chlorophyll. Most of us look better in green than prison gray at that.

Weary Washwoman"

Newest bar soap on the market contains 1) lanolin, 2) chlorophyll, 3) hexachlorophene.—Ed.

—— ♦ ——

Ohio Soap Decision

Editor:

You may be interested in a recent decision by the Ohio Court of Appeals relating to the product liability of a soap manufacturer—Fruper v. Procter & Gamble (reported in May 14, 1953 issue of Food-Drug-Cosmetic Law reports).

In this case the manufacturer of a bar of soap was held liable for injuries sustained by a user of the soap because of a piece of wire which was imbedded in it. The court sustained a jury finding of liability on ground of negligence and breach of warranty.

There are two rather unusual principles which were applied by the court in this case which make it rather bad precedent in the soap industry. The first is that the manufacturer was held liable on the ground of negligence although there was not an iota of evidence of any negligence. The court held that the fact that the wire

(*Turn to Page* 186)

How to Boost Soap

R. CRAIG CAMPBELL

IF SOMEONE should ask what single problem is most prevalent in the soap business, it would be: "To convince dealers that soap is a good item to carry and have them really believe it." I have always been sympathetic to the premise that retailers should make a reasonable profit on soap and have spent many hours with retailers who were willing to listen to the "How" to sell soap and benefit both from a profit standpoint and an over-all improvement in their store operation.

Unfortunately, in an economy like ours, there are those who overdo a good thing and cause a situation which, in the case of soap, develops ill will both for the product and its manufacturers. What I would like to do is to put forth a few tested, successful hows to market soap which will help retailers reap the benefits that are there.

First of all, let's look at what the soap business means in terms of usage by the American public. Having only 1/16th of the world's population, we consume one-third of the world's soap. That's a pretty good indication that consumers are soap conscious and also proof that the industry's advertising is paying off. But, in the face of this, there are many grocers today who, because they haven't stopped to analyze what this condition could mean to them, habitually resent the very product which can be influential in getting their own story of service across to the consumer. Let's look for a moment at soap and its position in the average store:

1. Soap leads the following items in total dollar volume: coffee, cookies, cereals, canned vegetables, sugar, butter, and flour, to name a few big ones.
2. Soap ranks first in frequency of purchase in this list of fast-movers: butter, cereal, eggs, sugar, coffee, tea.
3. Out of every 100 shopping bags, 45 purchases of powder or flakes and 32 purchases of bar soap are found.
4. On the basis of inventory investment, soap can be one of a grocer's biggest money-makers. Every $100 invested in soap can turn over in the average store 22 times per year without loss leader pricing, and produce 12 percent profit or $12. This $12 x 22 turns for the year equals $264. An item marked up 20 percent turning eight times a year produces $20 x eight or $160 per year on the $100 investment.
5. There is the incalculable profit from the standpoint of low operating costs when handling soap. For example, there is no need for special fixtures, refrigeration units or extra manpower expenses in handling. With little or no breakage or spoilage to cut profits, retail soap departments become one of the most economical to operate and maintain — and — this dollar volume is among the best. (It takes just 15 seconds for a competent clerk to price and stack a dozen packages of soap, compared with five minutes—20 times as long—for the same clerk to trim, display, weigh and price a dozen heads of lettuce.)

Advertising Problem

WE ALL appreciate the value of advertising or we wouldn't authorize advertising expenditures for our businesses. Why is it, then, that we hear so often from intelligent grocery men: "Don't spend so much on advertising and promotion and give us a better mark-up"? To do that obviously would be wrong because advertising expenditures and sales are synonymous. A lessening of one lessens the other, and the slowing of turnover reduces profits.

There is an old saying that "half of the money we spend on advertising is wasted, but no one can tell us which half!" A very true statement when it is measured against immediate sales results, but far from true when measured against formulating ideas, impressions and related action. Do all of the millions of people rush out to buy a product when they hear it advertised on the radio, see it on television or read about it in the papers? No, but how many of them become conscious of the product, its popularity or its availability? Almost 100 percent. It follows, then, that all of a grocer's customers are aware—and a great many are desirous—of the nationally advertised products the grocer carries, which makes the importance of proper pricing and merchandising very important. This consciousness and the desire for soap products are the avenues through which a smart grocer will sell his customers on the idea that his store is the best place for them to trade.

There are only a few products that a grocer carries which claim this awareness in the minds of consumers and soap is one of the leaders in this group. Therefore, it is folly for any grocer to neglect the proper marketing of these products, because his entire business is more often than not judged by what he does with these items.

The soap and synthetic detergent industry is spending annually almost $100,000,000 to develop this movement for their business and the grocer's. This can be compared with

Sales

By R. Craig Campbell*
Lever Brothers Co.
New York

a high voltage line of current running past each store, developing store traffic everywhere in America. Grocers can simply reach out and "hook in" to this current by tying in with this very expensive and effective effort. Through it and with it they will realize the greatest sales potential from the greatest number of customers.

"How" of Soap Selling

THERE is the "why" of selling soap. Now I want to suggest a few "hows" so that grocers can reap the benefits to be had through the proper sale of soaps and detergents.

1. *Feature nationally advertised brands*: A nationally advertised soap earns nearly three times more than an unknown brand. Actual sales tests prove the higher earning power of nationally advertised soaps. A nationally advertised brand of toilet soap, selling at a margin of 12 percent, with a turnover of 22 times, earned $2.64 annually for each dollar invested in inventory. Unknown and private brands, sold in the same store during the same period, with a margin of 18 percent and a turnover of 5.4 times, earned only 97c for each dollar invested in inventory. The unadvertised brand had a higher margin, but the nationally advertised soap grossed nearly three times more earnings per dollar of inventory investment.

2. *Merchandise soap seasonally*: Store soap volume increases substantially during the warm months. As is true with many other grocery products, soap volume in stores varies with the seasons. Summer sales of one soap, for example, show an increase of 16 percent over the February-March average. Another increases 25 percent in consumer movement during the warm weather. The size of the family wash goes up in the summer—and so does the package soap volume. One soap increases approximately 13 percent. Leading store operators take advantage of this trend. They counterbalance the summer slump in other items by giving extra merchandising attention to soap when demand for it is highest.

3. *Give preferred shelf position to national brands*: Well-known brands should receive preferred shelf positions for the following reasons: 1. To make it easy for customers to find what they want and buy on impulse. 2. The rapid turnover on known brands makes them nearly three times more profitable than unknown, slow-moving brands. 3. National advertising creates consistent consumer acceptance and frequent repeat sales. Volume on well-accepted soap products can drop 30 percent and more, sacrificing both turnover and profits, unless customers have a free opportunity to buy on impulse.

4. *Use four percent of total shelf space for soaps*: Soap department shelf space should be in direct ratio to total sales. Actual tests have shown that the average store should do at least 4.1 percent of its total volume in soap products, in order to serve its customers adequately. This was proved in a study made by Operation, Inc., and brought out by the fact that the soap shelf space in its grocery stores more than pays its way; and to use this space for longer mark-up items with a slower turn is a mistake too often made in some of the best stores in the business.

5. *Merchandise entire sales around soap*: The high frequency of soap purchase makes it one of a grocer's best traffic builders. When grocers merchandise soap, they merchandise it for the whole store. A customer who comes in for soap is always a customer for the hundreds of other items a grocery store stocks. Because the demand for soap is always high, soap merchandising requires basically these three things:

1. An adequate supply of all important brands.
2. Proper shelf and store displays that bring in maximum impulse buying for extra volume.
3. Periodic tie-ins and promotion of soap offers.

Full advantage should be taken of manufacturers' offers which build and maintain grocers' profits with special merchandising inducements other than price.

6. *Merchandise soap without loss-leader inducements*: Soap department advertising should be used often. Keeping in mind that soap is more frequently purchased — after bread and milk — and could be included in nearly all grocery advertising. Panel listings should always include brief selling copy on each item and, when possible, a product illustration for quick brand identity. Package soaps and bath-size cakes should be offered at "2 for 00c", regular size cakes at "3 for 00c" or in larger multiple units. Tests have proved that these combination prices, properly merchandised with special displays, actually sell more soap at profit-making prices and avoid the retailer the disappointment that normally results from loss leader selling. I have personally contacted a retailer who was displaying "Lifebuoy" at five cents per cake. With the retailer's permission, I erected a larger display, supported that display with the current "Lifebuoy" national promotion (I believe it was the Bob Feller tie-up), priced the brand at three for 17c, and the sales increased 320 percent.

7. *Hold customers with soap features*: Soap products are one of the most rapidly consumed items in the home. That's why grocery store customers buy soap products often. This makes it important for grocers to merchandise their soap departments every week, to keep customers well supplied with all the soap they need. One of the best ways to do this is always to feature multiple units and giant sizes. Emergency soap purchases by families who haven't bought enough is one sure way of losing regular customers. To avoid this, sell all customers all the soap they need

* Given before the February, 1953, conference of Operation, Incorporated, Sheraton Hotel, Chicago.

each week.

Many grocers have annual contracts with the large soap manufacturers. These contracts call for running a specified number of soap features in a given period. So often we see a customer running all of the soap brand advertisements for one company in one week, all of the brand features for the next soap company the following week, and then there is no soap advertising for five or six consecutive weeks. It is obvious that this account is simply running these features to fulfill its contract, with no thought toward reaping the benefits that soap features can give. Remembering that out of every 100 customers, 45 are interested and will buy soap, the interest and readership of a store's advertisement will be increased if soap features are run each week. Also, retailers should tie-in with national advertising copy. Large soap manufacturers will schedule one-half page and full-page national advertisements to break on the food day, and very often you see the local grocers ignore this advertisement by not running the brand in their own advertisements. If they would do this, the readership of their own advertisements would be increased greatly.

8. *Build frequent store-wide promotions*: Soaps are an effective basic group of products for store-wide selling events, such as a "Hot Weather Sale," a "Buy Two Sale," a "Soap Carnival," or a "Housecleaning Event." From time to time, Lever Brothers Co. and the other major soap manufacturers offer promotions such as these with complete advertising material, including newspaper mats and store display pieces. Selling events based on soaps can include dozens of other products for a complete, store-wide selling event. When merchandised with special floor and gondola-end displays, these special store-wide events are unquestionably the lowest cost promotions a grocer can use to increase effectively both soap and total store volume.

9. *Use shelf strips and shelf prices*: These are simple but important selling devices. With more than one-third of the nation's food store business done on impulse buying, shelf strips and shelf prices are extremely important fundamentals. Plainly marked shelf prices can improve movement of shelf items by at least 20 percent. A secondary use of shelf strips is the maintenance of shelf ratios for stock men. This is most important in maintaining sales on your best money-making brands. As in advertising, multiple prices should be featured, such as "3 for 00c" on regular sizes of toilet soaps; "2 for 00c" on bath sizes and packaged soaps.

10. *Soap can help store windows pay part of the rent*: Soap can help windows pay part of the rent by selling store value. Soap window posters are free and are easy to install. Used correctly, they dress up the whole store front and attract the attention of street traffic. These soap posters provide a quick impression of values which, coupled with the high frequency of soap purchasing, bring customers into the store. Once inside, these customers will generally make many other on-the-spot purchases.

11. *What to do when soap prices decline*: Finally, but not the least in importance, is the problem of what to do when soap prices decline. If a retailer will remember that Mrs. Consumer buys more on a soap decline than on a soap increase, as do the retailers, they will realize the value of marking their soap shelf prices down immediately to take advantage of this surge in buying by Mrs. Consumer. They will not stand to lose as much as a result of the decline, because they will make additional profit on a faster turnover. To hold to the old price simply because of its original cost only delays and lengthens the period of lost profit.

As grocers can see, it is not one major approach that will increase their soap sales and profit but the many small facets as I have outlined them. The combination of them all, I am sure, will make soap a better item for grocers, and more of an asset to their over-all store operation.

Cleanliness in America is a pretty wonderful asset that we can all enjoy and be proud of. I do feel, too, that in some measure we can thank the pioneers of the soap industry for their aggressive approach to the fulfillment of that asset. Probably some of that old aggression has rubbed off on a few of the soap men that contact grocers. However, they are sincere in wanting grocers to get the biggest share of the available sales.

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Swift "Maxine" Soap Deal

Swift & Co., Chicago, recently announced it has begun a one cent promotion campaign for its "Maxine" toilet soap, offering three bars at the regular price plus one for one cent. Newspaper space and point of sale material are being used throughout June to boost the special sale.

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Slogan to Aid Soap Sales

An attempt to recapture and rebuild the soap market was begun recently by the National Renderers Assn., with a slogan campaign among its members and that of other livestock industry organizations. Their slogan, "Real Soap Costs Less, Cleans Best," is to be used on a wide scale to meet growing competition from synthetic detergents.

At the same time, the association announced it has begun a three-pronged drive to cut into some of the tallow surplus via the development of new uses. Arrangements were signed recently in Cleveland for research work to be done at the Eastern Regional Research Laboratory in Philadelphia. The laboratory will conduct research in the use of inedible tallow and grease and their derivatives in the plastics and plasticizer fields. As part of the second prong of its program, the Association is currently negotiating with the National Meat Institute Foundation, to study the practical aspects of using inedible fats and additives in dog foods. Another important step taken by the renderers is the research project now in progress at Stanford Research Institute in California, an enterprise originally sponsored by individual West Coast members of the industry. The Association recently set aside $25,000 to accelerate the findings of new uses for surplus fats, which these research groups are seeking.

Foam Stabilization by Alkylolamides

By H. L. Sanders and E. A. Knaggs*

Ninol Laboratories, Chicago

ALTHOUGH proteins, gums and other colloidal materials have long been used to stabilize the foam of beer, confections and fire fighting chemicals, it is only in the past few years that attention has been turned to stabilizing the foam of cleaning compounds.

When soap was the only detergent available for dishwashing and laundering, the problem of foam stabilization seldom arose, since low soap prices permitted sufficiently high use concentrations to ensure copious foam. With the advent of synthetic detergents, however, the picture changed considerably. On the average, a pound of active detergent costs the formulator anywhere from two to five times as much as a pound of tallow soap, depending on the type of detergent used and the market conditions prevailing. Hence, the average packaged household detergent contains only about 20 percent active synthetic, as compared with about 60 percent active ingredient in a package of granulated soap.

Furthermore, the packaged synthetics are normally spray-dried into beads as contrasted to the heavier granules in the soap packages, all of which favors higher use concentrations of soap. When pouring equal volumes of both products into the dishpan, the housewife is apt to obtain only about 0.25 percent soap in the water, but only about 0.05 percent synthetic.

This amount of synthetic (along with phosphates and CMC) normally is completely adequate for cleaning dishes or clothes, because the synthetics attain their maximum detergency at low concentration levels. On the other hand, these low concentrations do create a foam stability problem.

By foam stability, we have reference here to the persistence of detergent foams in the presence of grease and other soils, rather than to the behavior of foams in clear water. In the absence of soil most of the synthetics foam up satisfactorily and persist quite well. When greasy soils from dishes or clothes are introduced, however, defoaming action is set up which the small amount of detergent present is unable to resist, and the foam bubbles often collapse rather rapidly.

In response to consumer demand for copious foam, much research has been carried out in an effort to improve the foam stability of synthetics in the presence of soils and, as a result, practically every major brand of powdered or liquid retail detergent on the market now contains a foam stabilizer. Almost without exception the stabilizer used is an alkylolamide type, often also referred to as an amine condensate.

Defines Alkylolamides

THESE alkylolamides are condensation products of fatty acids and alkylolamines along the lines first developed by Ninol Laboratories in 1937, and represent complex mixtures which are predominantly amides, but which may contain minor proportions of esters and more complex reaction products. The fatty acids used in these foam stabilizers are in the C_{10}-C_{16} range, careful selection being required for optimum results. The amines employed are usually monoethanolamine, diethanolamine or isopropanolamine. The corresponding alkylolamide foam stabilizers can, therefore, be described roughly as monoethanolamides, diethanolamides or isopropanolamides.

All three types of amides appear to be effective when correctly formulated, but only the diethanolamides are water soluble, making them especially suitable for liquid detergents. The monoethanolamide and isopropanolamide can be used in liquids only if solubilized by alcohol.

Although we are here concerned primarily with the foaming properties, it might be mentioned in passing that the diethanolamide types are excellent nonionic detergents in their own right, and also act as thickening agents, clarifiers and cloud-point depressants for aqueous solutions of sulfonated detergents.

In this paper are presented some experimental data on the foam stabilizing action of several alkylolamides.

Experimental: Numerous foam testing techniques are described in the literature, ranging from simple shaking methods to the use of perforated plungers, high speed stirrers or sintered glass bubblers. In practically all cases only clear aqueous solutions are used, however, soils being carefully excluded.

It is a practically universal rule in any surfactant application, that the test method should simulate the end use as closely as possible if significant results are to be expected. Small variations in test conditions can often produce completely different results. For example Ross (1) mentions that ethylene glycol solutions will foam profusely when air is bubbled through, yet do not foam at all when whipped by an electric mixer. It has been our

* Paper presented at 39th midyear meeting, C.S.M.A., Chicago, May 19, 1953.

own experience, too, that some products lather copiously in a scrubbing type dentifrice test, yet give almost no foam in dishwashing. During laundering or hand dishwashing operations, the foam is constantly being agitated and bathed in the soiled detergent solution, whereas this type of mechanical action is absent in most of the foam testing methods in laboratory use. This can easily lead to fallacious conclusions unless test results are checked frequently under practical operating conditions.

For the purpose of the present study, therefore, it was decided to employ a realistic test method involving the washing of soiled dishes, since hand dishwashing is a major end use for the foam stabilizers here under consideration.

Test Method

THE "dishpan" consisted of a large cylindrical glass battery jar 16 inches in diameter by 12 inches in height. The detergents were dissolved in about 100 ml. of water, placed in the dishpan, and then twelve liters of tap water (125 p.p.m. hardness) at 45° C. were run in from a height of 30 inches (using a constant head-overflow device to insure uniform pressure). This was designed to simulate the action of hot water running in from a kitchen faucet. The initial foam was thus generated in the absence of soil, and the head of foam was immediately measured by leveling it off as much as possible by means of a flat ruler or straight edge, and reading an average height through the side of the jar with a millimeter scale. This reading was facilitated by holding the straight edge level on a line judged to be the average of the surface of the foam and projecting the straight edge through to the wall of the jar so as to eliminate any meniscus effect. Eight dinner plates each were smeared with six grams of soil and were then washed in rapid succession without any dishrag, taking care to remove all soil and to maintain a uniform swirling and splashing action. After all eight dishes were washed, the residual foam was usually quite level, and this final foam height was again determined by means of the straight edge and millimeter scale. It was found that an experienced operator could reproduce the initial foam heights to within about six mm., and the final foam heights to about two mm., even on different days, so that this method appeared to be sufficiently precise for most purposes.

Some industrial laboratories do not measure foam height in this way, but instead count the number of dishes required to destroy all of the foam. In our experience this type of end point was found too vague, since some detergents give foams that subside quite rapidly at first, yet leave a very thin, tenacious residual foam layer that leads to spurious results. In practice, a high residual foam is more important to the housewife than the initial volume, because too rapid collapse of foam creates an impression of low "potency" and because it is preferred to have the dishwater hidden by a layer of white suds all through the operation. It might be mentioned that in the present test, final foam heights greater than about four mm. were required in order to mask the underlying greasy water completely.

In developing this practical laboratory dishwashing procedure, several soils were investigated. The relative defoaming power of such known foam depressants as Crisco, oleic acid, soya bean oil and Nujol were studied. The detergent used was a commercial sodium dodecyl benzene sulfonate, since alkyl aryl sulfonates are the most widely used type of household and industrial detergent. Preliminary evaluation studies, employing Crisco as the sole soiling agent, showed little correlation between laboratory and actual home dishwashing results, and therefore it was decided to prepare a representative mixed food soil. This soil mixture consisted of 50 parts Crisco (colored by lampblack), 12.5 parts flour, 7.5 parts raw egg, 7.5 parts butter, 7.5 parts mayonnaise, 7.5 parts tomato juice, and 7.5 parts corn starch. The soil was applied warm and allowed to dry on the dishes for an hour or two before use, the time being found not critical. The results of the defoaming action of various soils on the alkyl aryl sulfonate are presented in Table 1.

The initial foam heights in Table 1 were all obtained in clear tap water and should be identical. The variations actually observed are due to the difficulties in measurement caused by the unevenness of the initial foam surface.

From the figures for final foam given in Table 1, it is obvious that soils like Crisco or Nujol do not defoam as much as soya bean oil or oleic acid, the latter being an effective antifoaming agent. The mixed food soil (containing Crisco) used in this study is apparently also an active defoamer and is considered representative of kitchen soils commonly encountered.

It was decided to use a concentration of 0.025 percent active detergent in all further tests, since too much foam is left with 0.05 percent sulfonate after washing eight dishes, espe-

Table 1. Defoaming Action of Various Soils

Soil	Foam Heights (mm) 0.05% Detergent		0.025% Detergent	
	Initial	Final	Initial	Final
Oleic Acid	59	2	56	0*
Soybean Oil	63	18	54	4
Nujol	58	35	55	7
Crisco Only	64	20	58	8
Mixed Soil Without Crisco	61	5	55	0*
Mixed Soil (With Crisco)	60	10	53	1

* Foam all gone after four plates washed.

Table 2. Foam Stabilization of an Alkyl Aryl Sulfonate by a Dialkylolamide

Concentration in Solution (% Active) Alkyl Aryl Sulfonate	Ninol AA62	Foam Heights (mm) Initial	Final
0.025	....	56	2
0.021	0.004	60	9
0.017	0.008	63	14
0.0125	0.0125	57	17
0.004	0.021	54	17
....	0.025	39	7

Table 3. Foam Stabilization of Various Detergents by a Dialkylolamide

Concentrations (% Active) Detergent	Ninol AA62	Foam Height (mm) Initial	Final
0.025 Sod. lauryl sulfate	.....	50	14
0.0125 Sod. lauryl sulfate	0.0125	57	20
0.025 Sod. dodecyl benzene sulfonate	.....	56	2
0.0125 Sod. dodecyl benzene sulfonate	0.0125	57	17
0.025 TEA dodecyl benzene sulfonate	.....	50	1
0.0125 TEA dodecyl benzene sulfonate	0.0125	53	16
0.025 Sod. dioctyl sulfosuccinate	.....	27	5
0.0125 Sod. dioctyl sulfosuccinate	0.0125	45	12
0.025 Sod. oleyoylamide sulfonate	.....	44	6
0.0125 Sod. oleyoylamide sulfonate	0.0125	40	6
0.025 Alkyl phenol polyglycol ether	.....	35	3
0.0125 Alkyl phenol polyglycol ether	0.0125	35	3
0.025 Lux Soap*	.....	58	0
0.05 Lux Soap*	.....	60	10

* Run in distilled water to avoid precipitation.

cially in stabilized systems, as will be seen later.

Next, the foam stabilizing effect, obtained when increasing proportions of a special water soluble diethanolamide (Ninol AA62) are blended with the sodium dodecyl benzene sulfonate, was determined, as shown in Table 2 (total activity of sulfonate plus amide being 0.025 percent in all cases). Chicago tap water (125 p.p.m. hardness) was used at 45° C.

As can be seen from the last column of this table, the foam of the alkyl aryl sulfonate alone is largely destroyed after washing eight dishes, whereas blends with the dialkylolamide show greatly improved resistance to the defoaming action of the added soil. Although even the lower proportions of alkylolamide improve foam stability noticeably, best results are obtained with approximately 50:50 mixtures of sulfonate and amide.

As can be seen from the third column of Table 2, the initial foam in clear water is not improved significantly by addition of the dialkylolamide. It should be stressed again that the final foam height in the presence of soil is considered the real measure of stability.

Since "Ninol AA62" itself is only a moderate foamer, the improvement obtained in blends with the alkyl aryl sulfonates is definitely a synergistic effect, rather than merely an additive one.

Runs were also made to show the foam stabilizing effect at a higher detergent level (0.05%), with the following averaged results:

Detergent	Foam Height (mm) Initial	Final
0.05% Alkyl aryl sulfonate...	65	9
0.025% Alkyl aryl sulfonate + 0.025% Ninol AA62.....	70	40

The foam stabilizing action is perhaps even more pronounced at this higher concentration, but for test work a figure of 0.025 percent was considered more practical, otherwise too many dishes would have to be washed in order to approach a low-foam end point.

Although sodium alkyl aryl sulfonates are the most important of the household and sanitary supply detergents because of their low cost, a number of tests were made by blending the diethanolamide with other detergents in equal proportions. Table 3 presents some of the results obtained with a variety of detergents using 0.025 percent total active synthetic in tap water.

It is apparent from Tables 2 and 3 that the dialkylolamide is most effective with alkyl aryl sulfonates and lauryl sulfates, which is fortunate since these are the most widely used of the household and industrial detergents. The other sulfonates do not respond quite as well, and the nonionic polyglycol ether type of detergent is not stabilized at all.

It was thought of interest to test the effects of varying water hardness on the foam stabilizing action of the dialkylolamide on the sodium alkyl aryl sulfonate, and runs were made in distilled water (0 p.p.m.), Chicago tap water (125 p.p.m.) and Navy synthetic hard water (350 p.p.m.). Sodium tripolyphosphate was also added in some cases, since this is widely used with synthetic detergents. Results are given in Table 4.

Considering only the blends of sulfonate and dialkylolamide first (that is, without phosphate), it is apparent from Table 4 that the amide imparts high foam stability in both distilled and tap water. In the hard water, the stabilization is decreased somewhat.

Addition of polyphosphate does not have any definite effect on the sulfonate-amide blend in the softer waters, but helps restore foam stability in hard water.

Turning now to the behavior of the alkyl aryl sulfonate (sodium do-

Table 4. Effect of Water Hardness on Foam Stability

Concentration in Solution (% Active) Sod. Alkaryl Sulfonate	Ninol AA62	Sod. Tripoly.	Foam Height (mm) Initial	Final
Distilled Water (0 ppm)				
0.025	....	..	40	0*
0.025	....	0.10	52	0*
0.0125	0.0125	..	57	17
0.0125	0.0125	0.10	62	15
Tap Water (125 ppm)				
0.025	....	..	54	2
0.025	....	0.10	51	0*
0.0125	0.0125	..	57	18
0.0125	0.0125	0.10	60	17
Hard Water (350 ppm)				
0.025	....	..	53	2
0.025	....	0.10	52	1
0.0125	0.0125	..	53	10
0.0125	0.0125	0.10	55	14

* All foam completely disappeared after washing only 3-5 dishes.

Table 5. Foam Stabilization of an Alkyl Aryl Sulfonate by an Isopropanolamide

Concentration in Solution (% Active)			Foam Height (mm)	
Sod. Alkaryl Sulfonate	Ninol AD31	Sod. Tripoly.	Initial	Final
0.025	....	..	58	2
0.023	0.002	..	56	4
0.020	0.005	..	52	8
0.0125	0.0125	..	52	9
....	0.025	..	0	0
0.025	....	0.10	63	0
0.023	0.002	0.10	60	1
0.020	0.005	0.10	58	13
0.0125	0.0125	0.10	68	20
....	0.025	0.10	26	3

decyl benzene type) without any amide present, it is rather surprising to note its extremely poor stability in distilled water, as shown in Table 4, where the foam collapsed completely after the first few dishes. In another test, this extreme instability in distilled water was also observed even on increasing the concentration to 0.05 percent alkyl aryl sulfonate. In tap water the same effect was noted when the polyphosphate was added, presumably due to softening of the water. It was found that organic sequestrants like ethylene diamine tetraacetic acid also decreased foam stability in tap water.

In separate experiments, the other sulfonates listed in Table 3 were also run in distilled water (at 0.025 percent) and it was found quite generally true that foam stability was much lower in distilled than in tap water.

It follows that when sulfonated detergents are mixed with polyphosphates (as is done commonly in blended or spray-dried powders) the foam stability in the presence of food soils is apt to be extremely low, due to the water softening action of the complex phosphates. This can be overcome, however, by addition of an alkylolamide because blends of sulfonate and amide show good foam stability in soft waters.

Need Realistic Tests

INCIDENTALLY, these findings afford an excellent illustration of the need for realistic test methods, since the extreme instability of the sulfonates in distilled water containing food soils could not be detected at all in a Ross-Miles foam column. Presumably, the narrow tube used there supports the initial foam and prevents the collapse that is so obvious under dishpan conditions.

It should be emphasized that all dishwashing detergents and foam stabilizers should be checked in distilled water as well as in harder ones, by actual dishwashing tests, before a final selection is made. Products have actually been withdrawn from the market in some cases after their poor foam stability in very soft water areas became apparent.

The data so far presented have dealt only with the water soluble dialkylolamides. As an illustration of the stabilizing effect of the water insoluble type of alkylolamide, the results of experiments with a specially developed isopropanolamide (Ninol AD31) and sodium dodecyl benzene sulfonate are shown in Table 5, where the tests were carried out in tap water at a 0.025 percent total of sulfonate plus amide. The amide was brought into solution with a little ethanol for these tests.

As can be seen from Table 5, the isopropanolamide seems to require the presence of phosphates in order to attain maximum foam stabilizing action with alkyl aryl sulfonates. This offers no problem in practice, however, since this builder would normally be used in powdered synthetics containing large amounts of polyphosphate.

As a general rule, dialkylolamides would be used in liquid detergents and in ribbon blenders, where they are easily incorporated. The monoalkylolamides could be added to liquid detergents if sufficient ethanol is used as a cosolvent, but they do not exert their maximum foam stabilizing action on alkyl aryl sulfonates unless considerable amounts of polyphosphates are added which is, of course, impractical in liquids. Actually, the major use for the monoalkylolamides is in spray dried detergents where they are intimately associated with alkyl aryl sulfonates and polyphosphates in the sprayed bead.

Theory: The foregoing data amply demonstrate the foam stabilizing properties of the alkylolamides in an empirical way. The mechanism of their action is far from clear, however, and a number of experiments were carried out in an effort to develop a theoretical explanation for the observed effects.

One obvious possibility is that the alkylolamide strengthens the wall of the bubble mechanically, or toughens it. This hypothesis was checked in several ways. One approach was to study the drainage rate of films by the method of Miles, Ross and Shedlovsky (2), which consists of forming a film of detergent solution on a glass frame and observing the rate at which the colored interference bands move down the film. They found that commercial sodium lauryl sulfate gave very slow draining films (which they ascribed to high surface viscosity), whereas alkyl aryl sulfonates gave fast draining films. These experiments were repeated here, using 0.025 and 0.05 percent solutions at 25° C., and it was very easily confirmed that the lauryl sulfate gave a very slow draining, almost immobile film, while the alkyl aryl sulfonate formed a very fluid film with rapidly moving bands and flow patterns. On adding the dialkylolamide to the alkaryl sulfonate, however, no change in film type was observed; regardless of ratios used or total concentrations present in solution, the films were always of the fast draining type. It was also found that solutions of the dialkylolamide itself were fast draining. There is, therefore, no evidence from these tests that the amide increases the surface viscosity or rigidity of the foam film.

Another method of studying bubble strength is by comparing the

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New Wyandotte research laboratories, in the form of a modified "T", extend 322 feet along the street with central wing back 176 feet. Floor area is 75,000 square feet.

New Wyandotte Research Center

THE research center of Wyandotte Chemicals Corp., Wyandotte, Mich., went into full operation June 7. The new laboratory is a two story brick building, covering about one city block. Modular construction and movable partitions permit rearrangement of laboratories with a minimum of expenditure in time and money, while a complete air conditioning system ensures constant and clean working conditions. Test programs are aided by constant temperature and humidity rooms maintained at conditions specified for testing of fabrics and similar uses.

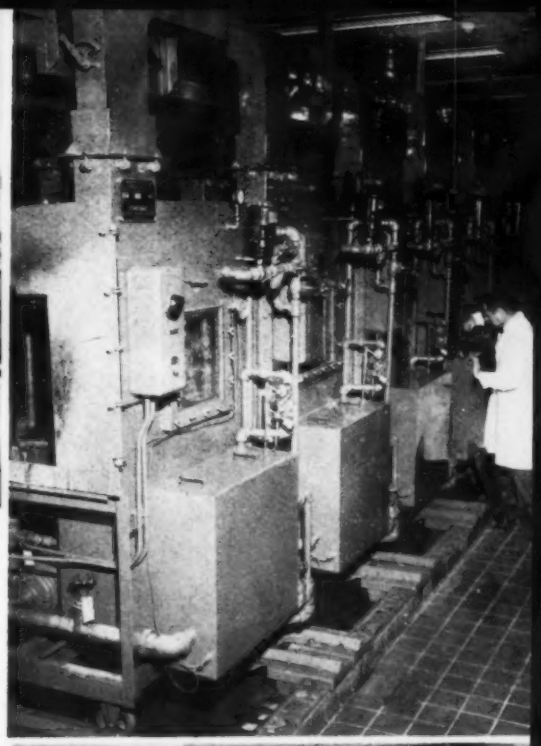
Through broadening and diversifying the company's line of products research has added in great measure to the strength and stability of Wyandotte, according to Robert B. Semple, president. In the J. B. Ford division alone which is a major producer of specialized cleaners and sanitizers, more than half of the current sales are in new and improved products introduced in the last fifteen years.

Thomas H. Vaughn, vice-president, research and development, mentioned the important part played by the research and development division in evolving the processes which have made possible erection of the firm's first large scale organic production units for glycol and related products, for alkylaryl sulfonate and nonionic type detergents and for carboxymethylcellulose.

Among special features incorporated in the new research building is a large seven stage spray washer, permitting duplication of almost any commercial cleaning cycle used by industrial plants in the United States. The laundry laboratory has a wide variety of laboratory scale test equipment for measuring detergency and cleaning properties, a machine for producing a uniformly soiled cloth, and small commercial size laundry equipment for larger scale tests.

The food technology department is equipped with dishwashing apparatus, three walk-in incubators for the microbiological section, and with a special inoculation room together with the necessary equipment for general bacteriological studies. This de-

(*Turn to Page* 83)



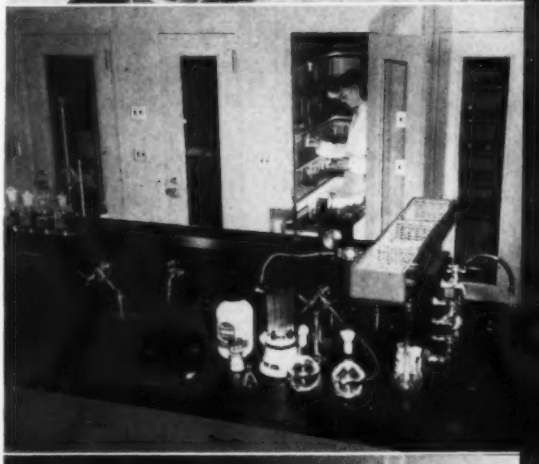
Multi-stage industrial spray washer (top, right) consists of seven completely independent units, which may be disconnected, pulled out, reassembled, and the line shortened or lengthened to duplicate precisely any kind of washing cycle.

Practical washing tests in the laundry and textile research department can be conducted with conventional agitator type automatic household washer, as shown in second photo from top, at right. A 20-pound open end washer, and extractor and a 40-pound cylindrical washwheel are also available to evaluate detergents.

Walk-in incubator (third from top, right) is thermostatically controlled to duplicate climatic conditions in many parts of the world. Incubators are in addition to a special inoculation room in the laboratories.

Radioactive materials are used to evaluate detergents at Wyandotte's new laboratory.

Photo at bottom right shows physicist removing a metal specimen previously coated with radioactive soil from the counting chamber of a Geiger counter.



Front of new Mellocraft Co. building in Toledo.

New Mellocraft Toledo Plant

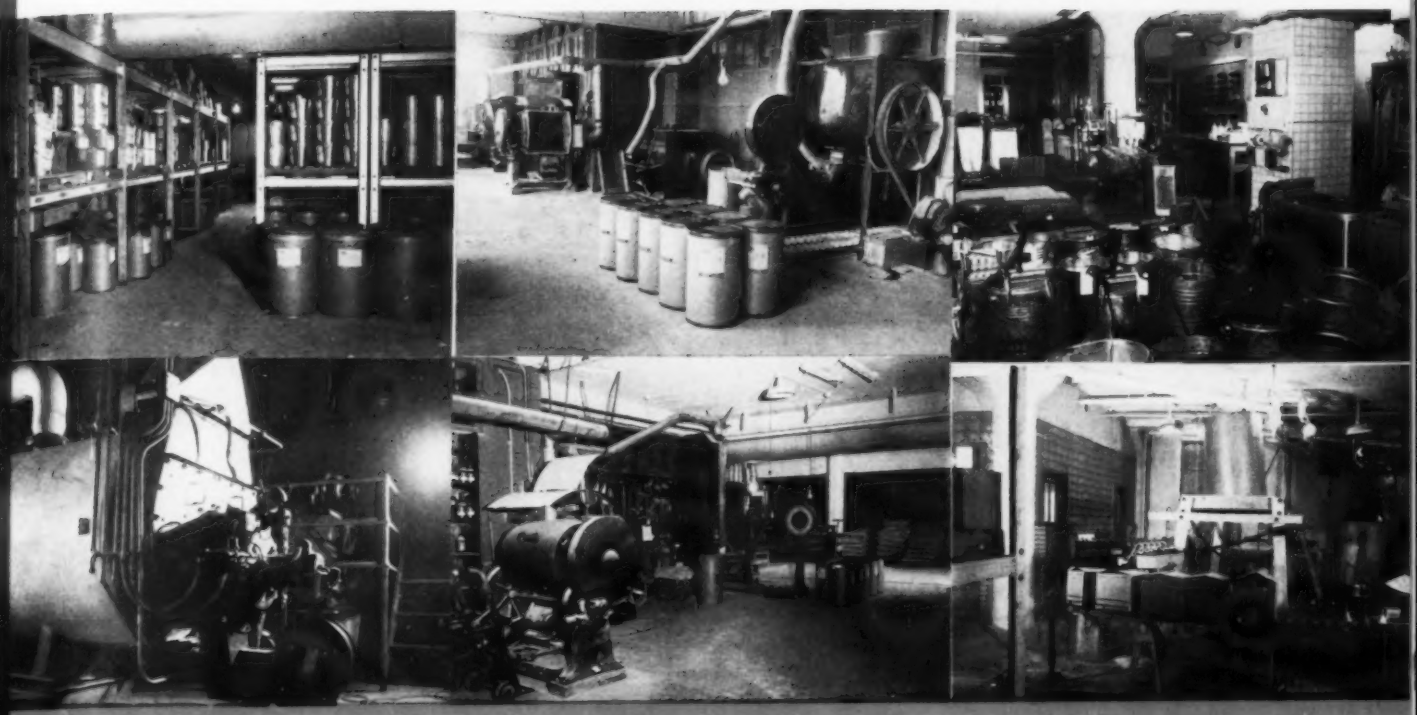
MELLOCRAFT CO., Toledo, O., is now in full operation in a new plant. Constantly increasing business necessitated the move. At the same time that the new quarters were occupied, Donald F. Peatee, general partner of Mellocraft, announced that the Van Nest Supply Co. of Toledo, which had been acquired a few months before, had consolidated its facilities with those of Mellocraft in the new building.

The history and growth of Mellocraft Co. is similar to that of other concerns in the sanitary chemical field in the last decade, but the volume of business developed by this company in Toledo and surrounding areas having a population of under 350,000 is unique. Mellocraft's operations are predominantly local.

To trace the development of Mellocraft, we go back to 1927. In that year, Beeswax Laboratories were formed to investigate new uses for beeswax. During 1931 Beeswax Labs. were incorporated as The Mellocraft Corporation. Its object was to make various beeswax products. These included a paste cleaner, an antique wax, and waxes for such sports equipment as golf clubs and tennis racquets. Mellocraft had difficulty in weathering the depression years.

In 1934, Don Peatee entered the organization. He had just been graduated from St. John's University in Toledo where he specialized in chemistry. That year the company decided to liquidate its assets but Don suggested that it continue the corporation name, which he considered a good one, while he continued his schooling nights at Toledo University. The equipment was moved to smaller, cheaper quarters. Instead of selling its products through regular channels, the company switched to direct selling. Mellocraft soon found that the line

Shipping facilities. Adjustable truck loading dock at right of truck.



By Dr. E. G. Thomssen

Palletized loads (top—left) are stored on steel racks to gain height and floor space. Automatic package boiler (bottom—left) for processing operations.

Views of dry mixing room (top and bottom, center).
Liquid filling departments (top and bottom, right).

of products it made was not sufficiently large to attract and keep door to door salesmen. Turnover of salesmen was too great. To overcome this handicap, a line of cleaning compounds and a water softener were added to the line. It also became necessary to inaugurate a course for the training of the sales crew. The depression and labor turnover continued to hamper the business but determination to succeed carried it over for a time.

Acquire Lewis Supply Co.

IN September, 1937, Lewis Janitor Supply Co. was purchased. Don turned the attention of the new setup, which was located at 909 Monroe Street, away from household products, to the industrial sanitary chemical field. In this way he increased sales and production volume. Nevertheless, the owners of Mellocraft decided to go into bankruptcy. Don bought the assets as an individual and continued operations. The Lewis name was dropped and he carried on operations under the Mellocraft name as the sole owner of the business.

During the latter part of 1938, Harley Peatee, Don's brother, became associated with the business. They moved the business a short distance to a larger building on Ontario Street just off Monroe Street. Here the business continued to expand and prosper, especially in the sanitary chemical field.

At the beginning of World War II, they saw the necessity for increased inventories and more space if they were to keep up with the increasing industrial activity in the area. This time they purchased the building at 411 Washington St., which at one time had been used as a German social club and which had an area of some 16,000 square feet. The building, though well located, did not provide sufficient space for the growing business and storage facilities elsewhere were required.

In 1951, a prolonged strike by the employees of Lakeside Biscuit Co. in Toledo compelled the firm to close down its plant and put the building up for sale. Early in 1952 Mellocraft purchased the building. Vandals had badly wrecked the windows, plumbing and heating systems during the labor dispute. In addition, considerable expense was required to transform a biscuit factory into a sanitary chemical plant. In this respect, the problem was not unlike that of the plant of U. S. Sanitary Specialties Co., Chicago, which was transformed from a bakery into a sanitary chemical plant several years ago. A survey of the Lakeside plant convinced the Mellocraft staff that the facilities were very useful to the Mellocraft expansion program.

Last July the biscuit company moved out entirely and Mellocraft and Van Nest began to move in. The transition progressed smoothly and the new plant is proving very satisfactory. All the operations of the two companies are now transacted from the new quarters. The 60,000 square feet of floor space, not including areas of dockage, garage and yard space, have been used advantageously. The general of-

(*Turn to Page* 106)

T.G.A. Meets, Re-elects Davis

DAVIS FACTOR, chairman of the board of Max Factor & Co., Hollywood, Calif., was re-elected president of the Toilet Goods Assn., at its 18th annual three-day convention at the Waldorf-Astoria Hotel, New York, May 12-14. Re-elected vice-presidents were Jean Despres of Coty, Inc., J. A. Ewald of Avon Products, Inc., both New York; H. J. Lehman of Wildroot Co., Buffalo, N. Y., and C. T. Lipscomb, Jr., president of the Pepsodent Division of Lever Brothers Co., New York.

Philip C. Smith, president of Yardley of London, Inc., New York, was re-elected treasurer and William F. Denney, Jr., president of Frances Denney, Philadelphia, secretary.

The following directors were elected for a three-year term: Charles N. Granville of Angelique, Inc., Wilton, Conn.; A. E. Johnston, Colgate-Palmolive Co., Jersey City, N. J.; J. I. Poses of D'Orsay Sales Co., New York; Benson Storfer, Parfums Corday, Inc., New York; Lloyd V. Young of Pond's Extract Co., New York, and L. B. Whitehouse, Sr. of Morton Mfg. Co., Lynchburg, Va. Directors representing associate members re-elected for another year were Peter L. Forsman of C. H. Forsman Co. and M. Lemmermeter, Aromatic Products, Inc., both New York.

In his address as T.G.A. president, Davis Factor urged repeal of the 20 percent excise tax on toilet preparations. Terming the tax a "federal penalty on good grooming," he also pointed out that the products of the toilet goods industry are perfect gift items and are in direct competition with non-taxed gift merchandise. Such a condition has cost the industry millions of dollars annually, Mr. Factor stated.

The growth of the toilet goods industry was briefly traced by Mr. Factor. Growing from an industry doing an annual retail volume of half a billion dollars during World War II years, it is now in the billion dollar class, Mr. Factor stated.

Commenting on the Delaney bill and other proposals for more stringent controls on the manufacture and sale of toilet goods and cosmetics, Mr. Factor stated that the T.G.A. is proud of the fine safety record of the industry and that general revisionary laws are not desirable. "Experience on a legislative committee just does not qualify our respected members of Congress to recognize and solve industry problems," Mr. Factor continued, stating that practically the entire industry is opposed to current measures which are objectively restrictive.

Burdensome and unnecessary restrictions should not be imposed on advertising that is truthful and factual, even though it is sensational and striking, Mr. Factor said, although admitting that the Federal Trade Commission is empowered to prevent false and misleading advertising. He also cautioned the industry on the use of sensational advertising unless it can be supported by scientific evidence.

Price maintenance or the so-called Fair Trade laws are now constantly under fire in the courts, Mr. Factor explained, adding that while thus far some of the efforts to destroy Fair trade effectiveness have been successful, this has not seriously damaged the industry. However, he added, with a slight decrease in the favorable economic tempo, price wars affecting toilet goods preparations and the value of the industry's trade marks may occur.

The program of the T.G.A. to assist the Department of Defense with a program of good grooming for women in the Armed Services is not only a "worthwhile patriotic gesture, but will also contribute to the overall educational program that the industry is anxious to put into effect," Mr. Factor said.

Also commenting on cosmetic advertising, S. L. Mayham, executive vice-pres. of T.G.A. suggested that careful scrutiny be given to the industry's advertising. He pointed out that there seemed to be a growing tendency toward exaggerated claims for products and especially for new products and that these claims would most certainly be looked at closely by the Federal Trade Commission. In addition, the fine acceptance of the value of advertising in the minds of the American consuming public might be endangered.

Mr. Mayham elaborated on the association's program to promote good grooming among the women in our Armed Forces. This training, he explained, consists of lectures and appropriate literature supplied to the Department of Defense by the Toilet Goods Association on behalf of the industry. The course, set to begin in the near future, will be given recruits at the four induction centers for women entering service.

Efforts of T.G.A. to secure repeal of excise taxes on toilet preparations were outlined by Mr. Mayham. The effects of this discriminatory tax on women, especially those who have to earn a living, are to be studied shortly by the Ways and Means Committee of the House of Representatives and appropriate steps are being taken to advise the Committee of the discriminatory nature of the tax, which imposes a burden on the manufacturer of toilet preparations as against the manufacturer of many other types of consumer goods.

Undue duplication of products in the field was discussed by T.G.A. counsel, Hugo Mock. He pointed out that when new products were launched by the manufacturer of cosmetics they are almost immediately duplicated by many competitors which places an excessive burden upon the retailer.

Mr. Mock indicated that while agreement not to compete in any given field for any specific time would

Factor

be in violation of Anti-Trust laws, industry members should not be in too great a hurry to follow the lead of their competitors when a new development of interest takes place.

In reviewing the general legal status of the industry, he pointed out that while the new Administration is supposed to be considerably more friendly toward the business community than was the former Administration, radical changes in the attitude of the Food and Drug Administration and the Federal Trade Commission are unlikely and that the pattern of law enforcement of both the Food, Drug and Cosmetic Act, the Robinson-Patman Act and other laws affecting the industry will not vary greatly from that of the past. He also discussed the services of the T.G.A. to the industry in what he termed "the hygienic, safety, and negative activities" of the association. These include defeating unreasonable legislation, the review of advertising copy by the Board of Standards and many other activities which have been over the years of tremendous value to every manufacturer of toilet goods, whether an Association member or not.

The danger of the possibility of "trade practice rules for advertising" being issued by the Federal Trade Commission was mentioned by H. D. Goulden, T.G.A. scientific director. The industry's recent tendency away from moderation in advertising, following the passage of the Wheeler Lea Act giving the F.T.C. jurisdiction over cosmetic advertising, to exaggeration which has aroused the interest of the F.T.C. was reported by Mr. Goulden. He suggested that firms in the industry avail themselves of the Board of Standards set up by T.G.A. to review advertising and promotional material, labeling, fill of containers, active ingredient statements, etc. Not once during the 16 years in which the T.G.A. has engaged in such activity has a piece of copy passed by the Board been subject to action by regulatory authorities.

In another section of his report, Mr. Goulden described the work of the T.G.A. Scientific Advisory Committee in setting up standards for raw materials. The Scientific Section of the association is growing, Mr. Goulden reported. More than 450 attended the December meeting, and a large attendance was expected at the group's meeting May 14.

Charles S. Welch Memorial Packaging Awards presented at the luncheon, May 12, went to Jules Montenier, Inc., New York, for its "Finesse Shampoo" package as the winner in the class of products selling at retail for under one dollar. The Montenier shampoo container is a gray, molded plastic bottle with black closure and trim. The accordion squeeze bottle has a captive cap designed for operation using only one hand.

Winner in the dollar or more product class was Erno Lazlo Co., New York, which received the award on the basis of its line of plastic containers for a recently developed line of treatment cosmetics.

The afternoon session May 12 opened with a discussion of advertising and promotion by Miss Bee Strawway, a consumer consultant. In her talk, which bore the title "Let's Face the Facts on Advertising and Promotion," she made the point that today's consumer is not statistical minded. She wants to be treated as an individual and responds more to reasons why a product will do something for her rather than to mere advertising claims. The problem of manufacturing a product is different from selling it, Miss Strawway stated. Products should be sold on the basis of what they will do for the customer, she advised her audience.

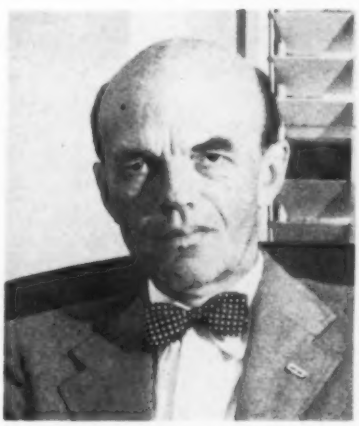
Applying the convention theme of "Let's Face Facts" to his speech on "Where Toiletries are Bought," Prof. R. S. Alexander of the graduate school of marketing, Columbia University, pointed out that the consumer's choice of outlets is conditioned by the nature of the product she is buying.

In this choice the consumer is motivated most in her choice of an outlet by convenience of the store's location (21 percent) and brand preference (20 percent).

Drug stores are still the most important outlet for shaving supplies,

DAVIS FACTOR

S. L. MAYHAM



C. T. LIPSCOMB, JR.

hair preparations and home permanents with department stores, variety stores and house to house selling and super markets ranked in importance for those items as listed.

Super markets and grocery stores rate highest in importance as outlets for tooth paste and powders, shampoos and shaving soaps and hand lotions, according to Professor Alexander.

Fully 28 percent of all the people who buy shaving soap, shaving cream and after-shave lotion are women, according to Dan Rennick, editor of *American Druggist*. Mr. Rennick spoke at the morning session May 13. He also pointed out that 13 percent of all the people who buy bath oil and other bath toiletries are men. He explained the large number of women buyers for shaving products, and the large number of men buyers for hand lotions and such by pointing out that wives frequently act as purchasing agents for their husbands and vice versa.

Mr. Rennick analyzed a study of consumer buying habits conducted for T.G.A. by National Family Opinion, Inc. Altogether, 20 basic toiletry and cosmetic items were covered in the survey. These items were: hair tonics and dressings, shampoos, shaving soaps and shaving creams, after-shave preparations, deodorants, tooth pastes and tooth powders, talcum and dusting powders, perfumes, colognes and toilet waters, bath preparations other than soaps, hand lotions and creams, other cosmetic lotions, face powder, make-up bases, cleansing creams, other skin creams, lipsticks, other make-up items, home permanents, nail enamels and removers.

Other facts reported by Mr. Rennick in his talk were:

On nine of 20 products, including shampoos, shaving soaps, shaving creams, and tooth paste, consumers prefer the large size, probably for economy reasons.

On 16 of the 20 items, the price range women prefer is from $1.00 to $1.99. The only product on which the preferred range is over $1.00 is perfume. On dentifrices, shaving soaps and shaving creams, the preferred range is under $1.00.

Miss Phyllis J. Carter and William C. Griffin (right) of Atlas Powder Co., receiving a $250 cash award from Robert A. Armstrong, president of CIBS (Cosmetic Industry Buyers and Suppliers) for the best paper given before the Scientific Section during 1952.

The most widely purchased toiletries are those which consumers started to use at an early age. On the following, more than 20 percent of purchasers started using the item before they were 14 years old: tooth paste and tooth powder, shampoo, talcum and dusting powders, deodorants, lipstick, hand lotions and creams.

Also, the average family buys 12 packages of tooth paste or tooth powder per year; eight packages of shampoo; six of deodorant; five of hair tonic and dressing; five of hand lotion and cream; four and one-half of shaving cream or shaving soaps; three of talcum and dusting powder and three lipsticks.

The final paper of the morning session was one dealing with product research by J. A. Straka, vice-president of Colgate-Palmolive Co., Jersey City, N. J.

Highlight of the luncheon, May 13, was the presentation of the three permanent trophies, played for by members of the T.G.A. only, at the golf tournament held at Winged Foot Golf Club, May 11. Ivan H. Budd of Ungerer & Co., New York, won the Cecil Smith memorial trophy; E. J. Hewitt of Evans Research & Development Co., New York, won the B. M. Douglas trophy and Paul Scott of Carr-Lowrey Glass Co., Baltimore, was the winner of the B. E. Levy trophy.

Other golf prize winners included:

Don Bryant of Richard Hudnut; Herbert Buchanan of Van Ameringen-Haebler, Inc.; Charles Buckie of Van Ameringen-Haebler, Inc.; L. L. Brennerholtz of Yardley of London, Inc.; John Duncan of Hazel-Atlas Glass Co.; Dr. Carl Larsen of Elizabeth Arden Sales Corp.; Peter L. Forsman of C. H. Forsman Co.; Max Freund, guest of Charles of the Ritz, Inc.; John Gabrielson of Avon Products, Inc.

Also, Sydney Goldstone of Miner's, Inc.; R. E. Horsey of Givaudan-Delawanna, Inc.; Frank Guernsey of White Metal Mfg. Co.; Charles T. Hoye of Rexall Drug; Joseph A. Huisking of Fritzsche Bros.

Also, Bill Hunnefeld of Jean Nate, Inc.; George Jablow of Charles of the Ritz, Inc.; Charles Junod of Pacquin, Inc.; George G. Kolar of Kolar Labs.; Robert Kramer of Evans Chemetics, Inc.; F. Levy-Hawes of Mauvel, Ltd.; A. F. Lindsay, Jr. of Van Ameringen-Haebler, Inc.; E. G. McDonough of Evans Chemetics, Inc.; J. Nelson McNash of Hazel Atlas Glass Co.; H. Robert Miller of White Metal Mfg. Co.; Arthur W. Mudge of Aromatic Products, Inc.; Fred D. Parker of Pond's Extract Co.; W. A. Poucher of Yardley of London, Inc.; John Rau of F. N. Burt Co.

Also, T. H. Reardon of Roubechez, Inc.; Andrew Rohman of Stanley Sapery Co.; Bernard D. Schofield of Densen Banner Co.; F. E. Shoninger of Antoine Chiris Co.; C. G. Twiname of B. Altman Co.; J. A. Ewald of Avon Products, Inc.; H. P. Wesemann of Fritzsche Brothers, Inc.

Miss Phyllis J. Carter and William C. Griffin of Atlas Powder Co., Wilmington, Del., were presented with a $250 cash award sponsored by the CIBS (Cosmetic Buyers and Suppliers

Association) by Robert A. Armstrong, President of CIBS, at the luncheon May 14. This award was made to the best paper in the judgment of the editorial board of the Proceedings of the Scientific Section, given before the section during 1952.

The CIBS were organized in 1948 as a group representing the younger members of the Toilet Goods Industry.

Scientific Section

ABSTRACTS of papers delivered before meeting of scientific section follow:

"Difficulties Encountered in the Use of Polyethylene as a Packaging Material," May 14, C. F. Wight, J. A. Tomlinson and S. Kirmeier of Van Ameringen-Haebler, Inc.

This paper brings together information on some of the important features to be considered when polyethylene is used as a cosmetic container. It attempts to acquaint the user with the permeation phenomenon so that adequate care and precaution will be used in the choice of materials thus packaged. In order to establish a sound theoretical approach, the observed effects in regard to perfume loss and product change have been examined in the light of related work on the permeability of high polymers to water vapor and permanent gases. The test methods available are discussed with their virtues and drawbacks. In a limited fashion, the effects of medium, of concentration and of temperature on the rate of transmission have been studied. Distention of the polyethylene wall is shown to be a factor in bottle collapse and reasons for breakdown of emulsions in contact with polyethylene are postulated. The degree of loss of a selected group of chemicals and essential oils has been charted and conclusions of a general nature deduced. Aspects of the special fragrance formulations required are considered. The need for an approach via coatings, fillers, plasticizers or laminates is stressed and some ideas are suggested.

"Hygroscopic and Viscosity Effects of Glycerine in Cosmetics," J. B. Segur and C. S. Miner, Jr., Miner Laboratories, Chicago.

This paper describes some observations in our laboratories that are pertinent to the use of glycerine in toilet goods.

One of the important reasons for including glycerine in toilet goods formulations is for its hygroscopic or moisture-retaining capacity. Because accurate hygroscopicity measurements are ordinarily time-consuming, we thought it worth while to develop a rapid method. Although we have used this method only on simple water solutions, we believe that the principles used should be applicable to many complete formulations. In the rapid method, a thin film of the substance to be tested is deposited on the fibers of glass cloth. Its dry weight is determined; then its changes in weight while coming to equilibrium with atmospheres of various relative humidities are followed. A new equilibrium is ordinarily reached in about 35 minutes.

In order to compare several hygroscopic agents under actual use conditions, vanishing creams prepared with glycerine, sorbitol or propylene glycol, and also without any humectant, were compared for moisture retention in uncovered jars. The use of any of the polyols markedly improved moisture retention. However, there was no significant difference between the samples containing the different humectants. Two concentrations, 11 and 15 per cent, of each humectant were used. As anticipated, the larger amounts were slightly more effective.

Observations on the viscosity of cosmetics made with different quantities of glycerine or other polyol show that in some formulas the viscosity of the preparation is at a maximum with a certain concentration of polyol and is decreased by the use of either more or less of the polyol.

"The Action of Hexachlorophene-Detergent Mixtures on the Bacterial Population of the Cutaneous Surface," by Irvin H. Blank, Ph.D. and Frances M. Barker, M.A.

Two to three days after starting the use of hexachlorophene-detergent mixtures for personal hygiene, the resident flora of the cutaneous surface is considerably reduced. (The word, detergent, is used in the broad sense to include soap.) When some transient bacteria reach a cutaneous surface which has a residual hexachlorophene film on it, they are not killed quickly by the hexachlorophene. Nor will a single washing with a hexachlorophene detergent remove all the transient bacteria. It must be remembered, therefore, that the use of hexachlorophene detergents does not assure the rapid degerming of a surface which has received transient bacteria.

We do not know the various factors which permit bacteria to invade the skin and produce lesions. It must not be assumed, therefore, that simply reducing the resident flora by the use of a hexachlorophene detergent will prevent skin lesions of bacterial origin. Sound evidence is still lacking to support prophylactic use of hexachlorophene detergents for various bacterial skin diseases.

Body odors may arise from two sources. An odorous material may be secreted onto the cutaneous surface by the cutaneous glands or an odorless secretion may undergo bacterial decomposition on the cutaneous surface to produce an odorous compound. It is obvious that only those odors which arise as a result of bacterial decomposition might be prevented by the use of a hexachlorophene detergent. The effectiveness of hexachlorophene detergents in the control of body odors must be determined by careful well-controlled observations.

"Repeated Insult Patch Test Method," by Herman A. Shelanski, Industrial Toxicology Laboratories, Philadelphia.

Several methods of patch testing on human subjects have been used and reported by many authors in the past. A discussion of these methods is here presented. In addition, the purpose and advantage of the repeated insult technique was discussed in much detail. Examples were also given of materials tested and compared by all these methods. The repeated insult method shows a new phase of skin reaction. This phase was discussed in great detail and its importance to the cosmetic and soap industries demonstrated.

"Methods of Determining Skin Emollients," by E. T. Hinkel, Jr., M. L. Tainter and F. C. Nachod, Sterling-Winthrop Research Institute, Rensselaer, N. Y.

The deposition of emollients on the skin from a superfatted synthetic detergent formulation has been studied. Using infra red and ultra violet techniques, it was possible to determine both qualitatively and quantitatively the nature of the deposited emollients. The methods employed should have application in other related fields. The results suggest that the detergent acts as a coupling agent between the skin and the fatty emollients.

"A Technique for Obtaining Infrared Spectra of Water-Soluble Gums, Part II: Identification of Gums," by S. H. Newburger, J. H. Jones, and G. R. Clark (Division of Cosmetics, Food and Drug Administration, Department of Health, Education, and Welfare, Washington, D. C.).

At the December 1952 meeting of The Toilet Goods Association a technique was described for obtaining the infrared spectra of films of water-soluble gums.

In this paper, the spectra of the more common gums are given.

The use of the spectrophotometric procedure for identification of the gums isolated from various products is also described.

"The Chemistry and Use of Musk Odorants: A Survey," by S. M. Spatz, Ph.D. and E. H. Polak, Polak's Frutal Works, Middletown, N. Y.

Musk odorants have become important ingredients of most modern perfumes. A comprehensive review correlating their chemistry and odor characteristics has not been available to the perfumer and to the essential oil chemist. The primary purpose of this paper is to fill this need by gathering information presently scattered throughout the literature. Some personal observations by the authors on the odor functions of musk odorants are included. The properties of a newly discovered class of musk odorants, the "Phantolid" type, are described for the first time. A comparison of its advantages and disadvantages with other commercially available musks is included.

The major portion of the paper is devoted to a treatment of the chemistry of musk compounds, beginning with the natural materials obtainable from animal and vegetable sources, covering the polynuclear and macrocyclic isolates from the aforementioned materials, and terminating with an outline of the synthetic musks: the nitro compounds, the macrocyclic synthetics, the complex macrocyclics, and a few miscellaneous synthetics.

"Development and Problems in Cosmetic Aerosols," by R. C. Downing and

(*Turn to Page* 185)

WHAT'S NEW?

New "Formula 444" insecticides, shown upper left, in half pint, pint or quart bottles has recently been introduced by Bromm Chemical Co., Evansville, Ind. Duraglas bottles by Owens-Illinois Glass Co., Toledo, closures by Bernardin Cap Co.

New "Summer Shower" line of toiletries (center, left) announced recently by Prince Matchabelli, New York, includes four cakes of aqua bath soap that retail for $1.00.

"Jet-Spray", first fluorescent lacquer packed as aerosol in can with "Day-Glo" fluorescent ink label has just been introduced by Lawter Chemicals, Inc., Chicago, lower left. Can is by Crown, with a Precision valve. Product available in six colors to retail for $2.80.

Offered as a new premium or gift item is package, lower left, of three Helen Wood cosmetics—a half pint hand lotion, and four ounce jars of cream shampoo and cold cream. Amole, Inc., Dayton, O., is maker of package which retails for $1.50.

New Sergeant's "Skip-Flea Shampoo", bottom right, was introduced recently by Polk Miller Products Co., Richmond, Va. Shampoo is being marketed nationally through a special combination offer. Comes in six-ounce Duraglas contour bottles by Owens-Illinois Glass Co., Toledo.

Facing page

"Cue" cream lotion shampoo, upper left, is being test marketed by Colgate-Palmolive Co., Jersey City, N. J., in four cities. Three types of "Cue" are available for oily, normal and dry hair.

A new and improved "Oakite", in both the regular and economy sizes, top, right, has recently been announced by Oakite Products, Inc., New York. Packages retain red and white Oakite color scheme.

New liquid mothproofer for washable woolens, called "Rex EQ-53", shown at extreme left, center, is being marketed by Rex Research Corp., Toledo, in Duraglas pint bottles and white metal closures by Owens-Illinois Glass Co., Toledo.

New waterless hand cleaner, center, middle row, produced by M & H Laboratories, Chicago, contains lanolin and glycerine. It is packed in can by Continental Can Co., New York.

"Lustre-Creme Shampoo", extreme right, center row, in new lotion form, has recently been introduced by Colgate-Palmolive Co., Jersey City, N. J. In lotion form the shampoo retails from 30 cents to $1.00.

New hand size toilet soap, lower left, made by Charles Antell, Baltimore, contains chlorophyll, lanolin and hexachlorophene. Two cakes retail for 29 cents—or 15 cents each.

"Dogzoff", bottom, right, a new plant and lawn spray to break dogs of bad habits around the home was introduced recently by Bohlender Plant Chemicals, Inc., Tippecanoe City, O. Packaged in Duraglas bottles and metal closures by Owens-Illinois Glass Co., Toledo, the repellent is distributed nationally by direct mail through drug and hardware stores. It is available in counter display units as shown in photograph.

Cue
Shampoo
Cue
Shampoo
Cue
Shampoo

oakite
NEW IMPROVED
oakite
FASTER · EASIER · MILDER
WALLS · WOODWORK
FLOORS · TILE
A better oakite for all cleaning
ECONOMY SIZE
REGULAR

REX
EQ-53
MOTHPROOFER
FOR
WASHABLE WOOLENS
MANUFACTURED BY
REX RESEARCH CORP. TOLEDO, OHIO, U.S.A.

Leaves Hands Soft & Smooth
M&H
Waterless
Hand Cleaner
Contains Lanolin & Glycerine
NO OFFENSIVE ODOR

Lustre-Creme
LOTION
SHAMPOO

Charles Antell
lanolin
Chlorophyll
Charles Antell

"DOGZOFF"
"DOGZOFF"
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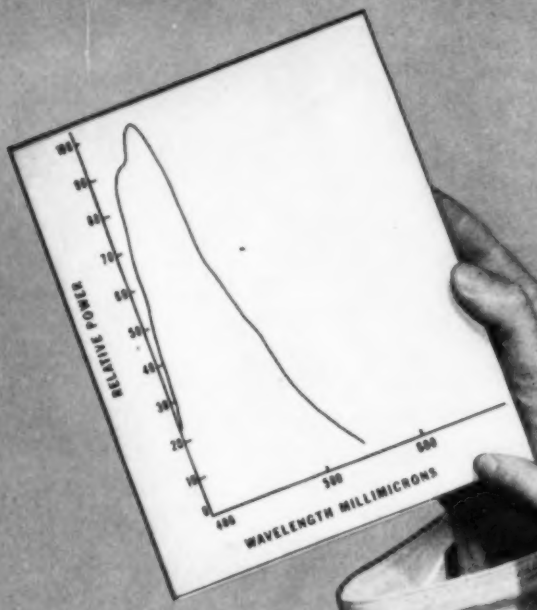
"DOGZOFF"
"DOGZOFF"

Here's how white becomes whiter



when you use

CALCOFLUOR*

whitening agents

The graph shown above is a spectroradiametric curve.
It shows the pure, blue, bright light which a CALCOFLUOR Whitening Agent emits in daylight when a cotton fabric is laundered in a detergent containing this optical bleach.

The blue light of a CALCOFLUOR Whitening Agent added to the cloth reflectance makes the white appear whiter. Good leveling characteristics and excellent fastness to hypochlorite characterize the CALCOFLUOR Whites. Suitable application properties can be obtained by the proper selection from the CALCOFLUORS listed below:

*Trade-mark

	Hue of White on Fabric	Bleach Fastness	Effect on Color of Soap Product	Substantivity
CALCOFLUOR WHITE B Conc.	neutral blue	good	slight yellowing	cotton, viscose
CALCOFLUOR WHITE MR Extra Conc.	slightly reddish blue	fair	whitens	cotton, viscose
CALCOFLUOR WHITE 4B Conc.	slightly greenish blue	excellent	no effect	cotton, viscose
CALCOFLUOR WHITE 2R Conc.	slightly reddish blue	good	slight yellowing	cotton, viscose
CALCOFLUOR WHITE RW	neutral blue	fair	strong whitening	nylon, acetate, wool

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CALCO CHEMICAL DIVISION
DYESTUFF DEPARTMENT
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This 16-ounce Boston Round has a bold ACL label to give fast brand identification. There are 19 sizes available in this style.

How to OUTSHINE your competition

Today's self-selling distribution calls for strong self-selling salespackages . . . packages that sell their contents by sight.

We create such packages for your products economically. First, we help you select from hundreds of low-cost, stock-mold Duraglas containers the one that is exactly right for your product. Then, our packaging experts add a metal or plastic closure and ACL or paper label design to give your package distinctive individuality.

Call our nearest sales office today. It is fully staffed to help you achieve a salespackage that knows how to "polish off" sales.

Duraglas packages are protectors of quality

TRADE MARK REG. U.S. PAT. OFF.

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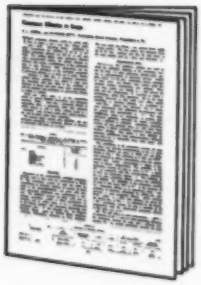
HOW CAN POTASSIUM SILICATES HELP YOU?

For liquid or paste potash soaps, Kasil Potassium Silicates are efficient detergent allies. They increase the sudsing ability of these soaps, they effectively suspend soil, and then prevent the re-deposition of removed soil. Unlike sodium silicates the use of Kasil builders in liquid or soft paste soaps does not materially alter their viscosity.

In sodium soap, the addition of Kasil Potassium Silicate partially converts it into a potash soap. Increased solubility and rate of solution as well as improved sudsing result without the possibility of salting out.



Let us send the supporting details on Kasil detergent values. Ask for publication, "Potassium Silicates in Soaps."

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PQ® Silicates of Soda

METSO® DETERGENTS

PHILADELPHIA QUARTZ COMPANY
1152 Public Ledger Bldg., Philadelphia 6, Pa.

Practical, widespread pressure packaging had its start with Crown's invention of SPRA-TAINER . . . World's First and Best Selling propulsion can. Crown leadership is further reflected in the design and manufacture of a vast variety of other fine cans for many different industries.

One of America's Largest Can Manufacturers

CROWN CAN
PHILADELPHIA
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CROWN CORK & SEAL COMPANY

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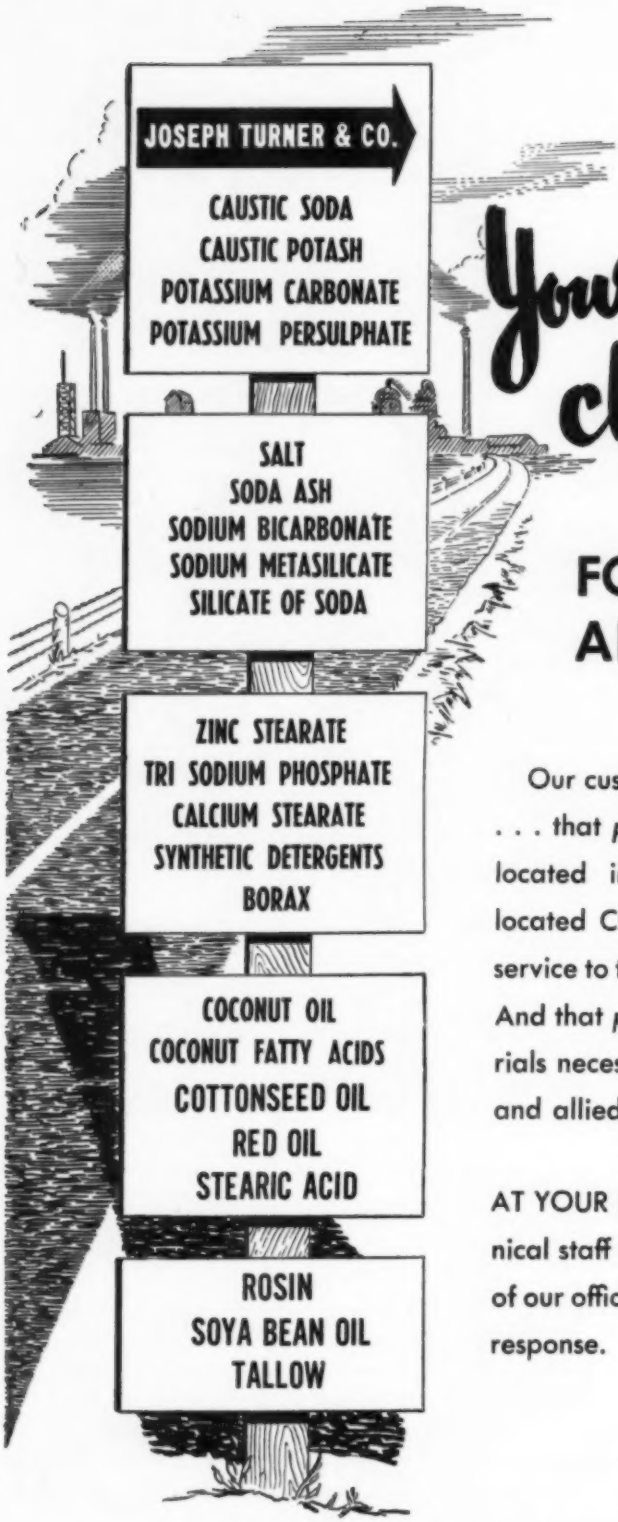


Your road to better chemicals... plus

FOR THE SOAP AND ALLIED INDUSTRIES

Our customers get a *plus* with every order . . . that *plus* is service facilitated by stocks located in strategic cities. Our centrally located Chicago office gives fast, complete service to the Midwest and West Coast areas. And that *plus* is in stocks of many raw materials necessary for the manufacture of soap and allied products.

AT YOUR DISPOSAL: Our experienced technical staff and facilities. Inquiries to any one of our offices will bring prompt and courteous response.

JOSEPH TURNER & CO.

83 Exchange Place, Providence, R. I. RIDGEFIELD, NEW JERSEY 435 N. Michigan Ave., Chicago, Ill.

News

Cowles Names Dr. Davidson

Appointment of Dr. John Barry Davidson as director of research was announced recently by Cowles

DR. J. B. DAVIDSON

Chemical Co., Cleveland. Dr. Davidson is in charge of the company's research laboratories in Syracuse, N. Y. A graduate of Williams College and Massachusetts Institute of Technology, he was formerly with Sharples Chemicals, Inc., Philadelphia, and later was associate director of research for Plaskon division, Libbey-Owens-Ford Glass Co., Toledo, O.

Sidney A. Kirkman Dies

Sidney A. Kirkman, former president of Kirkman & Co., Brooklyn, N. Y., before its merger with Colgate-Palmolive Co., Jersey City, N. J., died recently in New York. He was born in Brooklyn, a son of the late Alexander S. Kirkman, who founded the Kirkman concern, and the former Esther Field Hubbard, of Massachusetts. Surviving are his wife, Mary; a sister, Mrs. Thomas N. Gurney, and a brother Ralph Kirkman.

Clears Burke in Agency Suit

Frank G. Burke Jr., an official of the Manhattan Soap Co., New York, was cleared recently of complicity when the Appellate Division Court of New York, recently affirmed a $300,000 verdict awarded to Duane Jones Co., New York advertising agency, for the alleged "pirating" of agency accounts and personnel by former employees. Mr. Burke was included in the suit brought by Duane Jones, who affirmed that former employees had "breached fiduciary duty" in forming a new company by pre-selling some of his clients to come in with them.

New Manhattan Division

A new cosmetic division, with headquarters in Boston, was announced recently by Manhattan Soap Co., New York. At the same time, the company revealed that Charles L. Copeland, for the last 20 years division manager of Harriet Hubbard Ayer, has been appointed as vice-president and general manager of its new division. Following a period of investigation and survey of the national market, plans for the division's development will be announced as the line and initial markets are determined. Manhattan Soap produces "Sweetheart Toilet Soap," "Blue-White Flakes" and other soap products.

Ardis in New Post

Appointment of B. V. Ardis as Dallas district supervisor was announced recently by Colgate-Palmolive Co., Jersey City, N. J. Mr. Ardis is assisting Frank Bettin, district manager, in the distribution of the company's products.

New Shell Canadian Plant

A new chemical plant with an annual capacity of 20 million pounds of isopropyl alcohol and acetone has recently been built at Montreal East by Shell Oil Co. of Canada, Ltd. The isopropyl alcohol is the first to be manufactured in Canada and the acetone is the first to be manufactured in Canada from petroleum raw materials. The plant draws its feed stock from the company's Montreal East refinery. It includes special features which permit operation in temperatures as low as 20°F.

Patchell Joins Drew

Appointment of David M. Patchell as a field supervisor of the chemical specialties division was an-

DAVID M. PATCHELL

nounced recently by E. F. Drew & Co., New York. Mr. Patchell is responsible for the sales and servicing of Drew soaps, detergents and other laundry products in the Pennsylvania, Baltimore and Washington areas, and is working directly with commercial laundry operators. Mr. Patchell has more than 20 years' experience in supplying chemical products to the laundry and dry cleaning business. In addition, he has owned and operated his own dry cleaning and laundry plant.

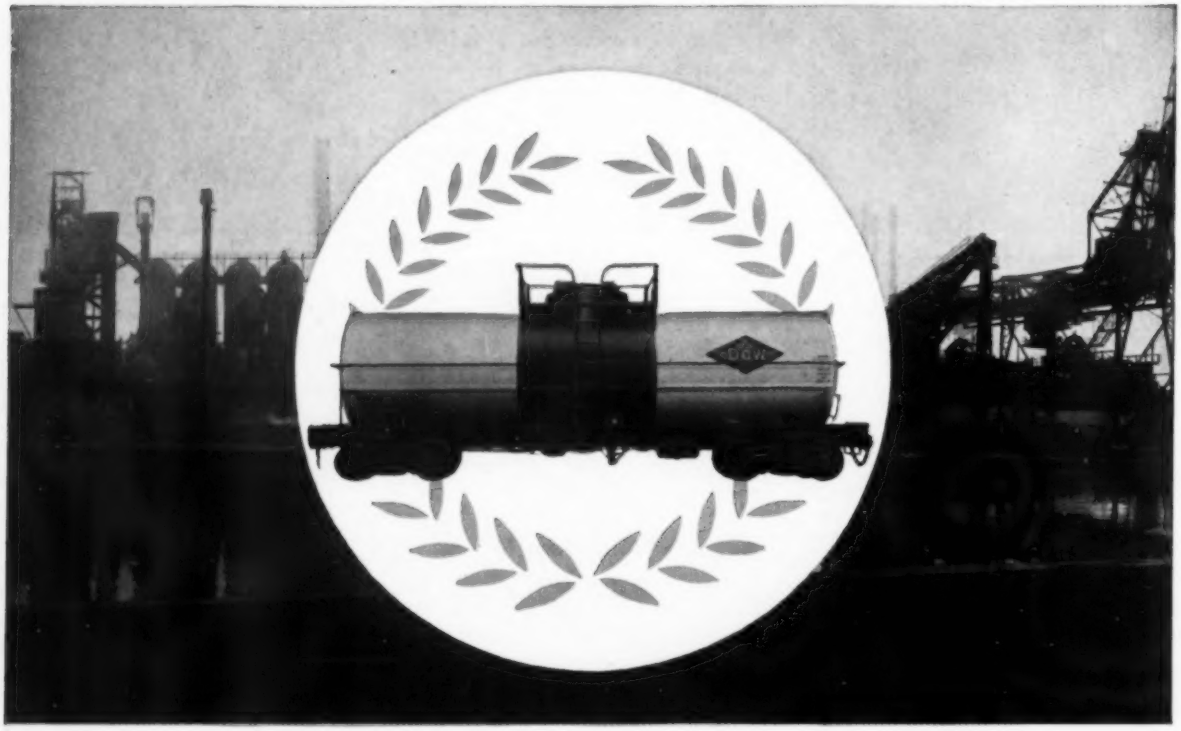
Hudnut Offers Shampoo

National distribution of a new Richard Hudnut "Marvelous" Shampoo has recently been launched by Warner-Hudnut Corp., New York. The company's sales organization has bought extensive magazine advertising space and television time to promote the new shampoo. The theme for all of the advertising is that the shampoo "preserves permanent waves, protects (hair) tint, and has single sudsing action". The shampoo is designed for normal to dry hair. Retail price of a four-ounce bottle of "Marvelous" is 60 cents, an eight-ounce bottle is $1, and the 16-ounce size, $1.75.

DOW

DOW CAUSTIC SODA GIVES THE PROCESSING RESULTS YOU WANT

The uniform, high quality of DOW CAUSTIC SODA can be depended upon to greatly benefit your plant operation



Once your processing methods and materials are set, you have to be certain that the standards are maintained to assure the same efficient results every time.

If you use caustic soda, you can benefit your processing operations by ordering from Dow. Dow caustic soda is quality controlled through all stages of production so that you can always depend on consistency of product. The shipment you receive tomorrow, a month from tomorrow, a year from tomorrow will all be uniform, will all produce the same results you require.

This consistent high quality factor in Dow caustic soda is extremely important to the efficiency of your plant. And, it is the same regardless of what form you buy. Dow can meet your requirements for 71-73% solution, 48-50% solution, solid, flake and ground flake.

The next time you order caustic soda, order from Dow for dependability of product, dependability of service. Dow's famous distribution network will meet your needs wherever you are. Send for the DOW CAUSTIC SODA HANDBOOK, a valuable addition to your files. THE DOW CHEMICAL COMPANY, Midland, Michigan.

you can depend on DOW CHEMICALS DOW

On P & S Spray Drying Staff

Appointments to the staff of a new spray drying department were announced recently by Proctor & Schwartz, Inc., Philadelphia. William M. Clelland, who has had many years of practical experience in spray drying, has joined the Proctor & Schwartz organization to head the new spray drying department. Dr. W. R. Marshall, an authority on spray drying and a consultant to the company for many years, is aiding in the development of new spray drying equipment. William Zamzow, chemical engineer, has been assigned to supervise engineering and design work.

WILLIAM CLELLAND

Solvay Advances Four

The advancement of four sales employees of Solvay Process Division, Allied Chemical & Dye Corp., New York, was announced recently by H. F. Merritt, vice-president. E. R. Oswald has been appointed to the post of manager of the export department, succeeding Charles A. Smith, deceased. A graduate of Cornell University, Mr. Oswald joined Solvay in 1940, and in 1951 was appointed supervisor of the export department.

Raymond B. Anthony has been named to the position of assistant manager of the special alkalies section. Mr. Anthony, a graduate of Brown University, joined Solvay in 1928, and has been associated with Solvay's sales office in Boston since.

F. P. Boehm has been appointed assistant manager, ammonium and potassium products section. He joined Solvay's technical service department, Syracuse, N. Y., in 1940 after being graduated from the University of Texas.

Robert L. Reynolds moves up to technical assistant to the manager of the special alkalies section. Previously Mr. Reynolds was a salesman at Solvay's Philadelphia branch. He joined Solvay in 1940, upon his graduation from Brown University.

C-P Expands Toronto Plant

Plans to build a one million dollar, seven-story wing to its Toronto, Canada plant were announced recently by Colgate-Palmolive Co., Jersey City, N. J. The addition, which is expected to be completed this year, will provide 90,000 square feet of additional floor space, of which all but the top floor will be used for manufacturing. About one thousand people are employed at the Toronto plant.

New Dog Shampoo

A new dog shampoo containing chlorophyll, lanolin, and lindane has recently been introduced by Dr. L. D. LeGear Medicine Co., St. Louis. The dog shampoo is designed to clean, deodorize, kill fleas, ticks, and lice; treat sarcoptic mange; restore natural oils; and leave the dog's coat soft and glossy.

Studies Radioisotopes Uses

James W. Hensley, research manager of the nucleonics laboratory of Wyandotte Chemicals Corp., Wyandotte, Mich., recently attended a two-week advanced course in the techniques of using radioisotopes in industry, at Oak Ridge, Tenn. Mr. Hensley uses radioisotopes in the study of detergency and other surface reactions involving metals, glass and fabrics.

Lifebuoy "Shower Stall"

A new floor merchandiser in the form of a shower stall was offered recently to dealers by Lever Brothers Co., New York, for display of new "Lifebuoy" soap. The stand, holding one case of regular size and one bath size "Lifebuoy", was featured in a May one cent sale of the soap.

Furman Joins Uhe

Appointment of Gerald S. Furman as vice-president in charge of the medicinal department of George Uhe Co., New York, was announced recently. In his new post, Mr. Furman is in charge of the import and export activities of that department. Before joining Uhe, Mr. Furman was associated for many years with Merck & Co., Rahway, N. J. and, for the past four years, has been with Gane & Ingram, Inc., New York.

GERALD S. FURMAN

Cosmetic Assn. Meets

Application of pharmaceutical chemistry and bacteriology to the problems of the cosmetic industry was discussed by Peter Hereld, vice-president of Chemo-Puro Manufacturing Co., New York, at a dinner meeting of the Society of Cosmetic Chemists, in Chicago, June 9.

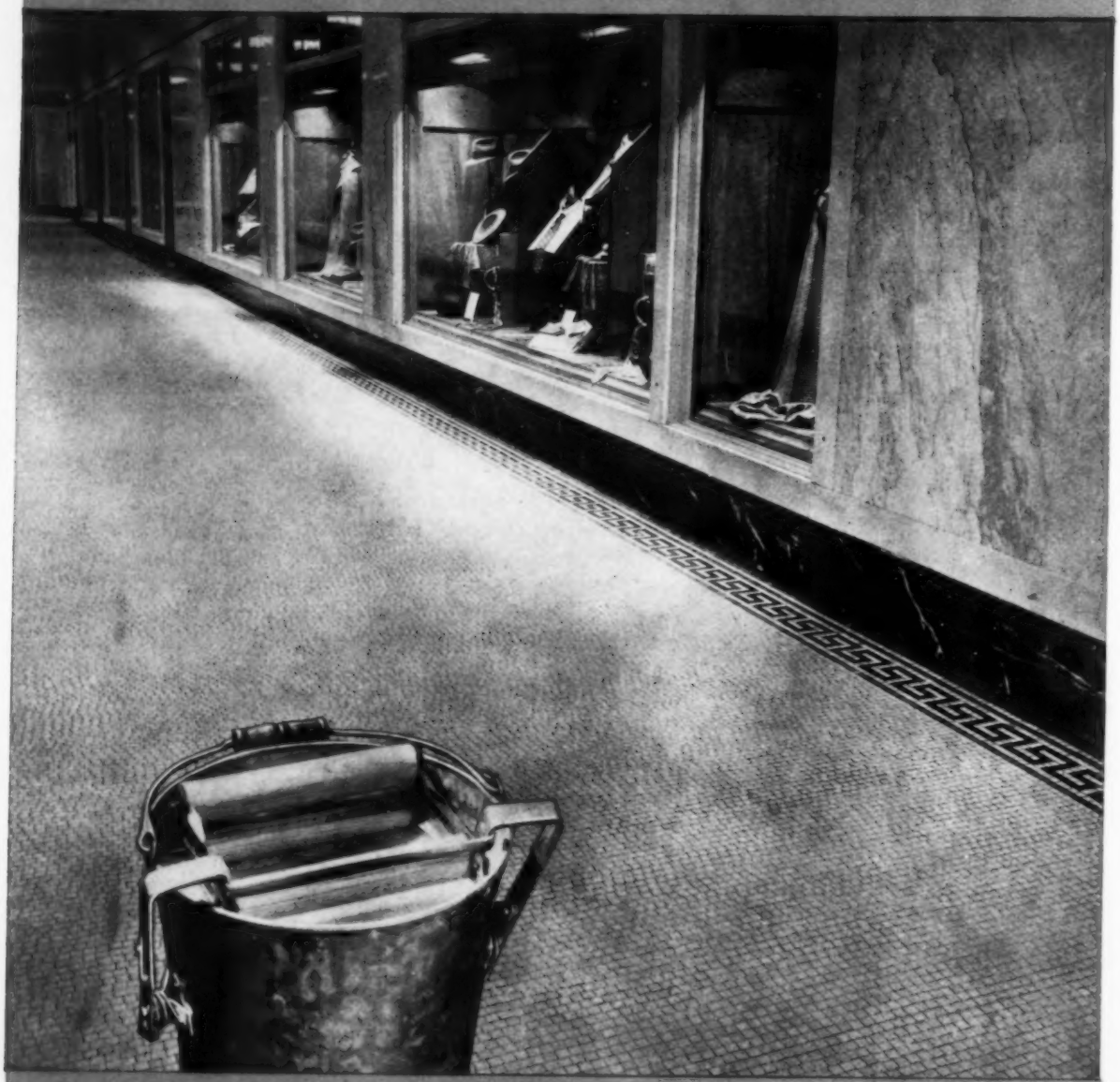
Perfumes for Soap

The importance of a well-balanced perfume in the scenting of toilet soaps is discussed in part two of an article, "Perfumes in Modern Industry," in a recent issue of *D & O News*, house magazine of Dodge & Olcott, Inc., New York. According to the author, "soap manufacturers want fragrances to be original, lasting . . . to the last grain or sliver without changing character or losing strength. Yet the scent cannot be harsh or overstrong. Perfume content of approximately one percent, depending upon the odor strength desired, is usually found satisfactory."

PINE OIL

for soaps, cleaning compounds, disinfectants

SMELLS CLEAN... CLEANS CLEAN



HERCULES POWDER COMPANY
INCORPORATED
Naval Stores Department, 961 Market Street, Wilmington, Delaware

NC53-3

Los Angeles Elects Grimm

Election of H. Paul Grimm as chairman of the board, president and general manager of Los Angeles Soap

H. PAUL GRIMM

Co., was announced recently at a meeting of the shareholders of the company. Mr. Grimm succeeds E. M. Finehout as president of Los Angeles. At the same time Mr. Grimm was named president of White King Soap Co., Los Angeles, a subsidiary which covers activities in the states outside of California.

Andrew K. Forthmann was named vice-president and assistant to the president for both companies. Elected directors of Los Angeles Soap Co. were: John B. Connors, Andrew K. Forthmann, Paul C. Merrill, Thomas A. J. Dockweiler, Nora Forthmann, Bernard G. Hiss, Benjamin M. Purdy and Victor H. Rossetti. Other officers elected were: E. M. Finehout, vice-president; Edward Douglass, Jr., vice-president; Paul C. Merrill, vice-president; J. W. Beazley, vice-president, secretary and treasurer.

A. K. FORTHMANN

Mr. Grimm has been a member of the board of directors for a year and a half. He is a former president of Pacific Western Oil Co., was oil umpire for California, and a director of Tide Water Associated Oil Co. Mr. Forthmann is a member of the law firm of Dockweiler & Dockweiler, Los Angeles.

New Lever Premium Offer

A new premium unit of a complexion brush and a nail brush is being offered by Lever Brothers Co., New York, for 65 cents and any two "Lux" toilet soap wrappers throughout this month. The premium regularly has a retail value of $2.00. An extensive advertising campaign is being conducted through the use of window and market posters, plus space bought in national women's service magazines and newspaper supplements.

Glycerine Stocks Rise

The total glycerine stocks at the end of March 1953 were 48.0 million pounds, compared with 42.6 million pounds at the end of February 1953, it was announced recently by the U. S. Department of Commerce, Washington, D. C. Domestic production of crude, including synthetic, increased 18 percent over February 1953 to a level of 21.0 million pounds. This is above the level of production of crude glycerine in March 1952. Taken together with January-February production, it represents a reversal of recent trends to lowered glycerine production.

Figures on the factory production and warehouse stocks of 100 percent basis glycerine, for March 1953, released by the Association of American Soap & Glycerine Producers, are as follows in thousand pounds:

Crude (includes synthetic glycerine) factory production 20,985; high gravity and yellow distilled 7,893; chemically pure 14,582. Factory and warehouse stocks of crude (includes synthetic glycerine) 13,015; high gravity and yellow distilled 14,856; chemically pure 20,146. Total for March 1953 came to 48,017.

Join Wrisley Sales Staff

Appointments to the sales staff of Allen B. Wrisley Co., Chicago, were announced recently by George

JOHN HEHNKE

A. Wrisley, Jr., general sales manager. John Hehnke was named as field sales manager to direct field operations in the drug and grocery division. He was formerly with the eastern division of Shaeffer Pen Co., Fort Madison, Ia. In 1949 he was appointed western sales manager, heading all divisions west of the Mississippi.

William A. Wright was appointed merchandising manager of Wrisley in charge of the merchandising programs in both the drug and grocery divisions. He formerly was for several years a salesman for Procter & Gamble Co., Cincinnati. In 1947 he joined Stopette, Chicago, as vice-president in charge of domestic and foreign sales, advertising and merchandising.

L. Norton Wrisley became

WILLIAM A. WRIGHT

A NEWCOMER you'll want to investigate

An All-Vegetable Oleic Acid With Exceptional Stability.

Send for your sample of CEN-OLEIC #1040 to make your own evaluation tests.

This new all-vegetable Oleic Acid has a color comparable to White Oleic, with superior color stability. The poly-unsaturate content is very low and results of the Mackey tests show over 6 hours to reach 105°C.

Study these specifications with relation to your special Oleic Acid compounding needs:

Iodine Value	84 — 92
Acid Value	191 — 195
Saponification Value	192 — 196
Titre °C	15 — 20
Color (Lovibond 5¼")	15 Y/3R max.

OTHER CENTURY OLEIC ACIDS

Century 1030 — White Oleic (U.S.P.)	Titre 3 — 5°C
Century 1020 — White Oleic (U.S.P.)	Titre 8 — 10°C
Century 1005 — Distilled Oleic	Titre 3 — 5°C
Century 1010 — Distilled Oleic	Titre 8 — 10°C

CENTURY BRAND

W. C. HARDESTY CO., INC.

Century Stearic Acid Products, Inc.

41 East 42nd Street, New York 17, N. Y.

PLANT: DOVER, OHIO

IN CANADA: W. C. HARDESTY CO. OF CANADA LTD., TORONTO

sales manager of the drug division, replacing Paul Litkowski, who has resigned.

Ira O. Fash, former market research manager, was named as assistant to the general sales manager. Mr. Fash, who has been with Wrisley for 22 years, has spent the past two years in market research, testing and account analysis.

◆

Mrs. Joseph Fels Dies

Mrs. Mary Fels, 90, widow of Joseph Fels, a founder of Fels & Co., Philadelphia, died recently in her home. Mrs. Fels, who was born in Sembach, Bavaria, attended St. Mary's Academy in Notre Dame, Ind., and the University of Pennsylvania. In 1881 she was married to Joseph Fels, who with his brothers, Samuel, Maurice and Abram, founded the soap company shortly before the turn of the century. Her husband died in 1914. She was the author of "Toward the Light" and "The Life of Joseph Fels."

◆

Reeves Wyandotte V.P.

Election of Robert L. Reeves as vice-president in charge of sales, J. B. Ford Division, Wyandotte Chemicals Corp., Wyandotte, Mich., was announced recently by Robert B. Semple, president, following a meeting of the board of directors. At the same time, it was announced that Donovan J. Gray had been named controller of the company. Mr. Reeves has been general manager of sales for the Ford Division since joining Wyandotte in January 1950. He came to Wyandotte from B. F. Goodrich Co., Akron, O., where he was in charge of retail merchandising.

◆

Niagara Alkali Ups Two

Appointment of James E. Ferris as director of sales and M. F. McCombs as manager, Chlor-Alkali sales, both newly created positions, was announced recently by Niagara Alkali Co., New York. Mr. Ferris, who is a past president of the Salesmen's Assn. of the American Chemical Industry, joined the company in 1926, and has been in sales since 1931. He is on the board of governors of the Chemical Specialties Manufacturer's Assn. and a member of the board of the

JAMES E. FERRIS

M. F. McCOMBS

Compressed Gas Assn. Mr. McCombs joined Niagara in 1921, and has been in sales since 1923. Before joining Niagara, Mr. Ferris was with the research laboratories of Lever Brothers Co., Cambridge, Mass. for several years. He is a graduate of Northeastern University, Boston.

Frank A. Fisher Dies

Frank A. Fisher, 55, divisional sales manager for Colgate-Palmolive Co., Ltd., Toronto, Ont., died recently of a heart attack. He joined the firm in London, Ont., more than 22 years ago and had been associated with the Toronto office for nine years.

◆

DCAT 1954 Dinner Date

The 28th annual dinner of the Drug, Chemical and Allied Trades Section of the New York Board of Trade will be held at the Waldorf-Astoria Hotel, New York, March 4, 1954, Lloyd I. Volckening, chairman, announced recently.

◆

Special Toni Research

Completion of arrangements covering special research and pilot plant activities to be carried on by Edwal Laboratories, Ringwood, Ill., on projects sponsored by Toni Co., Chicago, has recently been announced by Dr. Walter S. Guthmann, president of Edwal. Dr. Guthmann said Edwal is supplementing Toni's program of cosmetic research by developing and pilot-planting new raw materials.

The New York headquarters of Dodge & Olcott, Inc., formerly called the Graybar-Varick Building, have recently been renamed as the Dodge & Olcott Building in honor of the firm's 155th anniversary celebration. The company has had its offices and laboratories in this building since 1930.

6 = 10

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the economical detergent silicate

Sixty pounds of DRYMET—*anhydrous* sodium metasilicate—will do the same amount of work as one hundred pounds of pentahydrate sodium metasilicate! You get approximately two thirds more chemical value in DRYMET, yet the price is less than one fourth higher at the producing factory!

DRYMET contains no water of crystalization. DRYMET is more economical to use on the basis of Na_2O (alkalinity) and SiO_2 (silicate) than *any other* type of anhydrous or hydrated detergent silicate.

If you are compounding with detergent silicates, investigate DRYMET for higher concentrations and longer mileage in such products as:

1) Floor Cleaners
2) Laundry Products
3) Metal Cleaners
4) Dairy Cleaners
5) Dishwashing Compounds
6) General Purpose Cleaners
7) Soap Builders
8) Paint Cleaners
9) Paper De-inking Compounds

Send for DRYMET File Folder containing complete technical information.

If you are using detergent silicates directly in your operations, investigate DRYMET for:

1) Reductions in product costs
2) Reductions in freight costs
3) Reductions in storage costs
4) Reductions in handling costs
5) Reductions in labor costs

* Reg. U. S. Pat. Off.

HEAVY CHEMICAL DEPARTMENT

COWLES CHEMICAL COMPANY

7016 EUCLID AVENUE • CLEVELAND 3, OHIO

Jewett New C-P V.P.

Hugh Jewett has been elected a vice-president of Colgate-Palmolive Co., Jersey City, N. J., it was announced recently by E. H. Little, chairman of the board. At the time of his election, Mr. Jewett was comptroller and secretary of the company. He was named comptroller in 1951 and secretary in 1952. He joined Colgate in 1930 and was made assistant comptroller in 1942.

HUGH JEWETT

Westvaco Ups DeLargey

Robert J. DeLargey, formerly general assistant to the operating vice-president, was appointed recently as director of engineering for Westvaco Chemical Division of Food Machinery and Chemical Corp., New York. Mr. DeLargey, prior to joining Westvaco in 1951, was assistant general manager of Grove Regulator Co. of Oakland, Calif., and former superintendent of Shell Chemical Co.'s plant in Pittsburgh, Calif. He is a chemical engineering graduate of Case Institute of Technology.

Waterless Hand Cleaner

A new waterless hand cleaner which is claimed to remove all types of stains and paint discolorations from exposed skin areas has recently been introduced by M. & H. Laboratories, Chicago. It is claimed that the cleaner uses no harsh abrasives or ammonia; but cleans quickly with lanolin and glycerin. The cleaner is said to rinse off easily with water, leaving the skin clean and soft.

P & G Net Higher

Procter & Gamble Co., Cincinnati, recently reported net earnings of $34,445,671, or $3.57 a share, for the nine month period ended March 31. Net profit for the same period of 1952 was $33,510,412, or $3.47 a share. Sales of vegetable shortening and products were not listed.

Hold Givaudan Parley

Dr. Alfred de Waldkirch, production manager of L. Givaudan & Cie., S.A., Vernier-Geneva, Switzerland, arrived in the United States recently for an extended visit to the plant of Givaudan-Delawanna, Inc., at Delawanna, N. J.

Hooker Names Bruyn

Appointment of George J. Bruyn as assistant to the general sales manager of Hooker Electrochemical Co., Niagara Falls, N. Y., was announced recently by Robert E. Wilkin, vice-president and general sales manager. Mr. Bruyn has just returned to the company from Washington, D. C. where he has served on the National Production Authority. He had been appointed chief of the alkalies section later being named deputy chief and finally chief of the inorganic and agricultural chemical branch of NPA.

Mr. Bruyn has been with Hooker since 1924, first in the accounting and traffic departments. In 1939 he was transferred to the sales department and until his recent appointment had been manager of the Niagara sales office.

GEORGE J. BRUYN

Fanning Appoints Blodgett

Appointment of George H. Blodgett as sales manager for its line of lanolin, absorption base, degras and other chemicals was announced recently by Fanning Chemical Corp., Newark, N. J. An alumnus of New York University, Mr. Blodgett was formerly associated for 12 years with Botany Mills, Passaic, N. J., where he was manager of sales for the lanolin division.

GEORGE A. BLODGETT

"Par-Buster" Golf Dates

The first outing of "Par-Busters," the golf auxiliary of the Chicago Perfumery Soap and Extract Assn. and the Chicago Drug and Chemical Assn., was held at the River Forest Country Club, Elmhurst, Ill., May 21. Reservations for the golf match and dinner were handled by Joe Sell, Mallinckrodt Chemical Works, Chicago.

Other "Par-Busters" outings are scheduled for: June 16, Rolling Green Country Club, Arlington Heights, Ill.; July 22, Olympia Fields Country Club, Olympia Fields, Ill.; Aug. 20, Elmhurst Country Club, Elmhurst, Ill.; and Sept. 15, Midlothian Country Club, Midlothian, Ill.

Detrex Fills Sales Post

Appointment of Charles J. Conforti as regional sales manager for the chemical processing division was announced recently by Detrex Corp., Detroit. Mr. Conforti is in charge of the division's sales in the west central region, which includes Michigan and Indiana.

in
cleansing powders . . .
your
product makes friends
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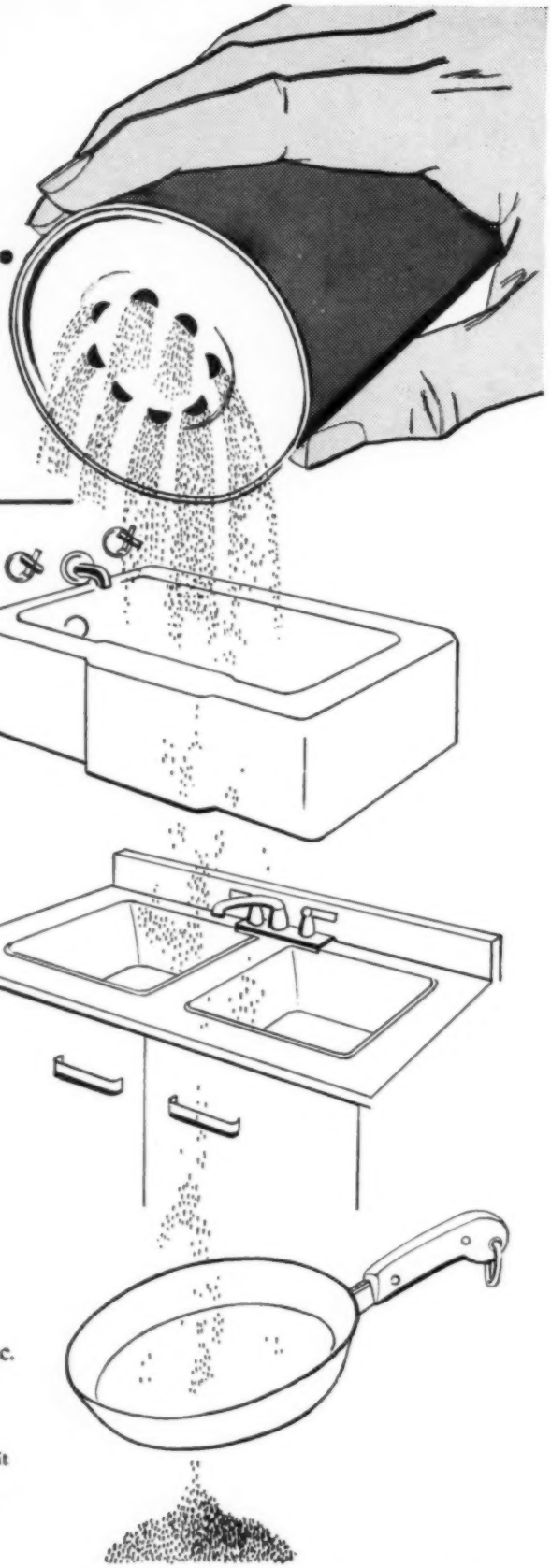


where GIVAUDAN odors
build repeat sales

The cleansing powder that just "doesn't sell" may well be the one in which odor repels rather than attracts consumers.

For sure odor-appeal in your cleansing powders, depend on GIVAUDAN. Here, specialists effectively mask the undesirable odor that may be present in an efficient formula . . . replacing it with an odor of proved consumer appeal.

For the *right* answer to any odor problem . . . consult GIVAUDAN.

Givaudan-Delawanna Inc.

Leaders in Creative Perfumery
330 West 42nd Street, New York 36, N. Y.
Branches: Philadelphia • Boston • Cincinnati • Detroit
Chicago • Seattle • Los Angeles • Toronto

Oscar Witt Dies

Oscar Witt, 52, engaged in the novelty soap manufacturing field, died recently at his home in North Bergen, N. J. Mr. Witt is survived by his wife, Mrs. Anne Quinn Witt, and his daughter, Miss Carol Witt.

PROCTER THOMSEN

AOCS Elects Thomsen

New officers of the American Oil Chemists' Society, elected recently at the annual meeting in New Orleans, include: president, Procter Thomsen, associate director, in charge of process standards, chemical division, Procter & Gamble Co., Cincinnati; vice-president, Charles E. Morris, production manager, refinery, Armour & Co., Chicago; secretary, T. H. Hopper, head of the analytical and physical division, Southern Regional Research Laboratory, New Orleans; treasurer, A. K. Kapecki, secretary, Wurster & Sanger, Inc., Chicago. Board members-at-large chosen at the meeting are H. C. Black, assistant director of research, Swift & Co., Chicago; J. C. Konen, research director, Archer-Daniels-Midland Co., Minneapolis, and W. A. Peterson, head, standardization and quality control division, Colgate-Palmolive Co., Jersey City, N. J.

The officers will serve on a governing board of 11 members, of which the others are the four most recent past presidents: 1952, E. M. James, Lever Brothers Co., New York; 1951, A. E. Bailey, Humko Co., Memphis, Tenn.; 1950, J. R. Mays, Jr., Barrow-Agee Laboratories, Inc.. Memphis; and 1949, V. C. Mehlenbacher, Swift & Co., Chicago. Retiring past president this spring is C. P. Long, Procter & Gamble Co.

At the technical sessions of the meeting, 28 papers dealing with the chemistry and technology of fats and oils were presented.

Westvaco Names Sommers

Appointment of H. A. Sommers as chief engineer of the Westvaco Chemical Division has recently been announced by Food Machinery and Chemical Corp., New York. Since joining Westvaco in 1950 Mr. Sommers has been assistant chief engineer with particular responsibility for the Intermountain Chemical soda ash plant development at Green River, Wyoming.

A graduate of Case Institute of Technology, Mr. Sommers was formerly associated with Mathieson Chemical Corp., Baltimore, as project engineer and works manager for its Lake Charles, La., magnesium-chlorine plant. Prior to joining Westvaco he was manager of the carbon dioxide plant operation of the Pure Carbonic Corp.

Permag Moves Headqtrs.

Removal of its manufacturing facilities and head offices from 131 St. Peter St. to 300 Aran Ave., St. Lambert, was announced recently by Canadian Permag Products Ltd., Montreal.

FTC Hears Price Complaints

Complaints of price discrimination involving Lever Brothers Co., New York, Procter & Gamble Co., Cincinnati, and Colgate-Palmolive Co., Jersey City, N. J., were heard at a meeting of the Federal Trade Commission, May 19, in Washington, D. C.

N. E. Oil Chemists Meet

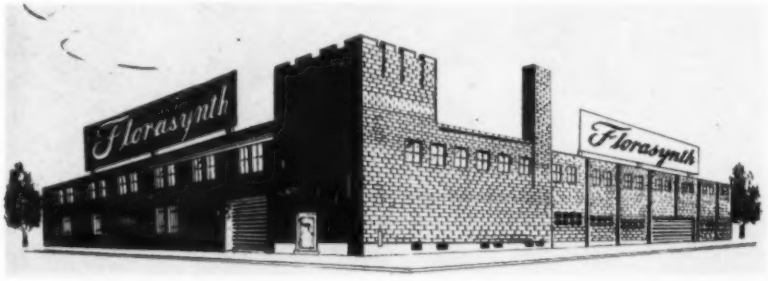
The technological aspects of functional derivatives of fatty acids was the subject of an address by Dr. J. P. Kass, director of research, Atlas Powder Co., Wilmington, Del., before a meeting of the Northeast Oil Chemists Society, on June 2, at the Building Trades Employers' Association, New York.

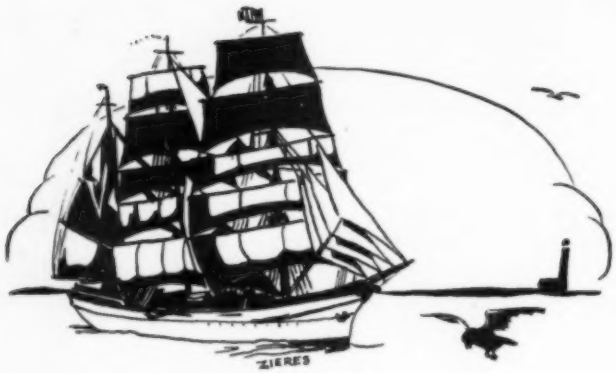
Sims Returns Optimistic

The immediate outlook for business in Europe was termed very favorable recently by William M. Sims II, president of Colgate-Palmolive International, a subsidiary of Colgate-Palmolive Co., Jersey City, N. J. He returned recently from a two-month trip covering 10 European countries, his first since being elected president of the company. He was accompanied on his return trip by W. B. B. Furgusson, vice-president of the international division, and C. Vucoino, vice-president and general manager of Palmolive Spa, Milan, Italy.

Florasynth Buys New Plant

Enlarged facilities for a new plant and offices have been acquired by Florasynth Laboratories, New York, William Lakritz, president, announced recently. The new home of the Florasynth plant is the building and grounds at 900 Van Nest Ave., Bronx, formerly occupied by Borden Co. The building provides the company with an additional area of 70,000 square feet for production, shipping and office facilities. Included in the new building will be large new research and development laboratories. Florasynth is maintaining production at both the new plant and the present headquarters. Operations will be centralized in the new plant early next year.





Since the Days of the "Clipper Ship..."

Soapers have depended on WH&C ...for Raw Materials of Quality

SINCE 1838, we've been supplying the nation's "soapers" with basic raw materials.

CHECK YOUR NEEDS FROM THIS LIST

VEGETABLE OILS

Babassu, Castor, Cocoanut, Corn, Cottonseed, Olive, Palm, Peanut, Sesame, Soybean

ANIMAL FATS

Sperm Oil, Oleo Stearine, Lard Oil, Neatsfoot Oil, Grease, Tallow, Lanolin

FATTY ACIDS

Red Oil, Tall Oil, Stearic Acid, Hydrogenated Fatty Acid, Cottonseed and Soybean Fatty Acids, Tallow

ALKALIES

Caustic Soda, Solid, Liquid, and Flake
Soda Ash, Light and Dense
Carbonate of Potash, calcined and hydrated
Calcium Chloride
Tri Sodium Phosphate
Tetra Pyro Phosphate
Quadrafos Granular and Beads—a stable polyphosphate for water conditioning and mild but effective detergency.

SILICATE OF SODA—Liquid powdered and solid.

META SILICATE—"Metso"* Granular.

METSO* DETERGENTS—55, 66, 99.

MAYPONS—Unique surface active agents; prolific foam; high detergency and emulsifying powders; suitable for cosmetic and industrial use.

AIR DRYETTES • CHLOROPHYLL

** Reg. U. S. Pat. Off., Phila. Quartz Co.*

Let us mix your dry private formulas

Established 1838

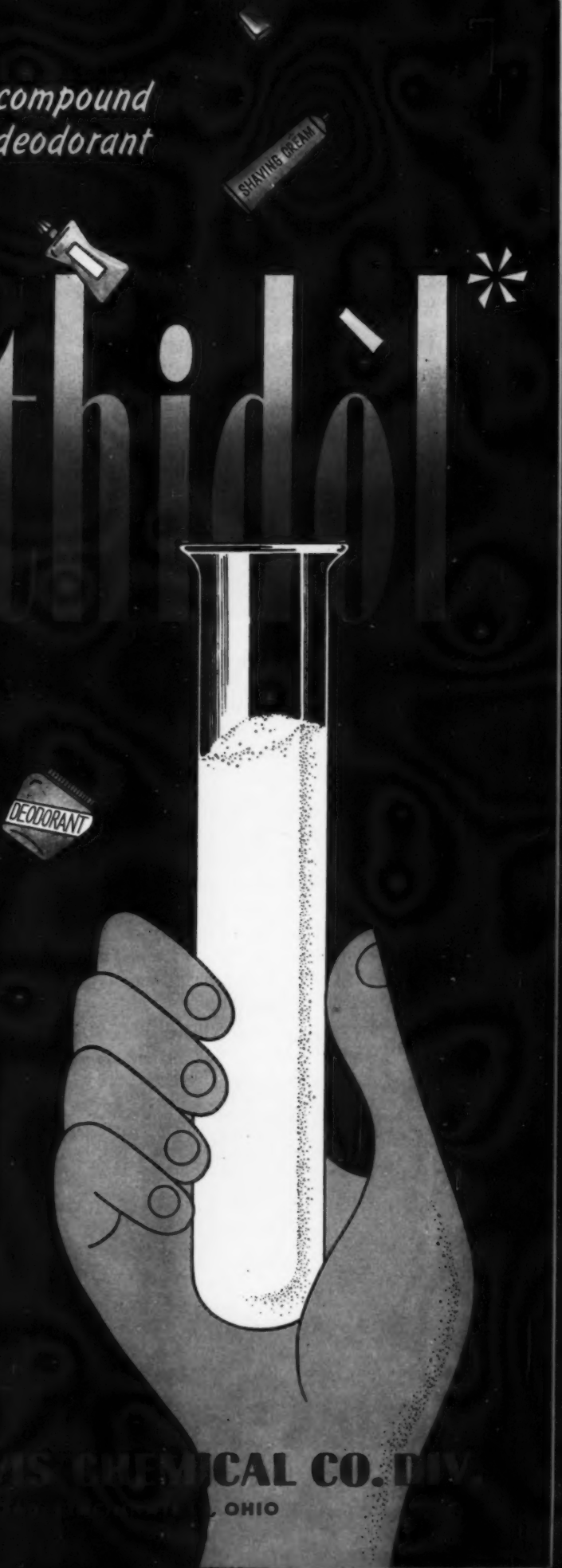
Welch, Holme & Clark Co., Inc.

439 WEST STREET NEW YORK 14, N. Y.

Warehouses in New York and Newark, N. J.

Now... a deodorant compound that needs no deodorant

Lorothidol*



Tests prove that this important new bacteriostat will not develop odor in soap on aging— will not mask perfume.

HOW IT WORKS—Lorothidol prevents the growth of many pathogenic micro-organisms, especially gram positive cocci. Over 90% reduction of resident skin bacteria is accomplished by use of only 1% Lorothidol in soap because Lorothidol has a marked affinity for the skin.

WHAT IT ACCOMPLISHES—Since bacteria-free perspiration is known to be virtually odorless, the bacteriostatic properties of Lorothidol, in preventing growth of bacteria on the body, can effectively eliminate body odors caused by perspiration.

EXCLUSIVE PROPERTIES—Lorothidol does not develop any phenol odor in bar soap on aging, nor does it cover or mask delicate perfumes or effect the decomposition of perfumes. *It has no color.* Tests indicate that Lorothidol is non-sensitizing and non-irritating to human skin. Its lack of toxicity is unusual in a bacteriostatic deodorant compound. It has been found to have extraordinarily good compatibility with most toilet goods formulations. Hilton-Davis will be glad to consult with you on the use of Lorothidol in your products.

*Trade-mark, Hilton-Davis Chemical Co. Div.
Brand of 2,2′-thiobis (4, 6-dichlorophenol)

THE HILTON-DAVIS CHEMICAL CO. DIV.
CINCINNATI, OHIO

LOW SUDSING

and good wetting at low concentration

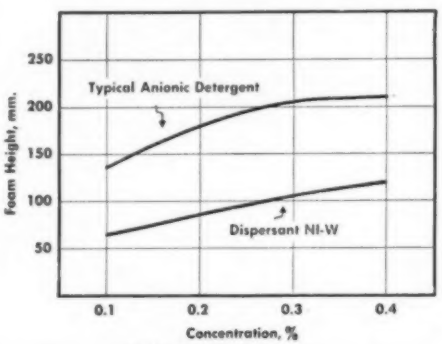
New Nonionic Surfactant

If you have an operation requiring a surface active agent, but where "suds" or "foam" are a handicap, it will pay you to investigate Oronite's new water-soluble Dispersant NI-W. It will solve this problem for you.

Because NI-W is in the chemical class of alkylphenyl polyethoxyethanols, it is both heat and chemically stable. It is effective in hard or soft water. It is completely compatible with soaps, anionic detergents and cationic germicides.

NI-W may be compounded with phosphate or other builders and dried to give free-flowing granular products. Suitable also for making liquid detergents. NI-W is a very adaptable product for the manufacture of economical high-quality formulations.

Available in inner-coated drums or tank cars for product purity. Technical bulletin and sample available on request.



ROSS-MILES FOAM TEST
SOLUTION TEMPERATURE 110°F—WATER HARDNESS 300 ppm

The above chart shows, that at equal concentrations, the foam created by Dispersant NI-W is only about half as high as when a typical anionic detergent (alkyl aryl sodium sulfonate type containing approximately 40% active ingredient) is used.

ORONITE CHEMICAL COMPANY
THE NAME TO WATCH IN CHEMICALS

A partial list of Oronite products:

Detergent Alkane, Detergent Slurry, Detergent D-40, Detergent D-60, Dispersant NI-O (oil-soluble emulsifier), Dispersant NI-W, Wetting Agents, Lubricating Oil Additives, Cresylic Acids, Gas Odorants, Sodium Sulfonates, Polybutenes, Naphthenic Acids, Phthalic Anhydride, Ortho-Xylene, Xylol, Aliphatic Acid, Hydroformer Catalyst, Dispersant FO (Domestic Fuel Oil Inhibitor)

"The world's largest producer of synthetic detergent raw materials"

ORONITE CHEMICAL COMPANY

38 SANSOME STREET, SAN FRANCISCO 4, CALIFORNIA
30 ROCKEFELLER PLAZA, NEW YORK 20, NEW YORK
STANDARD OIL BLDG., LOS ANGELES 15, CALIFORNIA
600 S. MICHIGAN AVENUE, CHICAGO 5, ILLINOIS
MERCANTILE SECURITIES BUILDING, DALLAS 1, TEXAS

Continental Advances Two

Election of John G. Murray and Peter Wojtul as vice-presidents was announced recently by Conti-

JOHN G. MURRAY

nental Can Co., New York. Mr. Murray, formerly general manager of Bond Crown & Cork Co., a Continental subsidiary, continues to head the company's operations in that field, with headquarters in Wilmington, Del.

Mr. Wojtul, who was named director of sales last January, is in charge of sales for all product divisions. He is a graduate of Loyola University and joined the company in 1927 in the lithograph department of the Chicago plant. Transferred to East St. Louis in 1930, he served on special assignments until 1935, when he became assistant in the comptroller's department of the New York office. In 1947 he was appointed director of sales research and development, and three years later became general manager of sales in the metal division.

PETER J. WOJTUL

Mr. Murray joined the company's general manufacturing department in New York in 1929, following his graduation from Yale University. He was named assistant general supervisor of the sales service department in 1942. He later served, successively, as business manager of the Chicago plant; as assistant to the vice-president in charge of equipment development and research, and as general manager of Bond Crown & Cork in 1951.

Monsanto Names Kocher

Appointment of Donald H. Kocher as branch manager of the Detroit sales office of the plastics division was announced recently by Monsanto Chemical Co., St. Louis. Mr. Kocher joined Monsanto in 1946, at the plastics division's Springfield headquarters. In 1947 he was assigned to the Detroit office as technical sales representative for surface coating resins, and became assistant manager in October 1952. He was graduated from Ursinus College in 1936.

Johnson Joins Mathieson

Appointment of S. S. Johnson as a vice-president of the commercial development division of Mathieson Chemical Corp., Baltimore, was announced recently by Thomas S. Nichols, president. Mr. Johnson, a graduate of Stevens Institute of Technology, previously was associated with M. W. Kellogg Co., E. B. Badger & Sons Co., and the Badger Process Division of Stone & Webster Engineering Corp. Mr. Johnson is making his headquarters in the company's New York offices, 745 Fifth Ave.

Hooker Names Engineers

Appointments of Robert J. Entenman as a chemical engineer in the process study group and William B. Corcoran, Jr., as a draftsman in the engineering department were announced recently by Hooker Electrochemical Co., Niagara Falls, N. Y. Prior to his recent employment, Mr. Entenman served in the Ordinance Corps of the Army. Mr. Corcoran formerly was with E. I. du Pont de Nemours & Co., Wilmington, Del.

New Fritzsche Officers

Fritzsche Brothers, Inc., New York, recently announced the election of Frederick H. Leonhardt, former

F. H. LEONHARDT

president, to the newly created office of chairman of the board. Mr. Leonhardt, who is in his 60th year of service with the company, joined the firm in 1894 and became its president in 1934, a post he has held since.

John H. Montgomery, first vice-president, succeeds Mr. Leonhardt as president. He came to Fritzsche Brothers in 1925 after previous executive experience in the essential oil and chemical fields. Other officers elected at the same time include the following: H. Paul Wesemann, first vice-president; John L. Cassullo, treasurer; D. A. Neary, secretary; Ernest S. Guenther, second vice-president; Fred. H. Leonhardt, Jr., third vice-president; Joseph A. Huisking, fourth vice-president; G. A. Wohlfort, assistant treasurer; Arthur Hemminger, assistant

JOHN H. MONTGOMERY

New! Improved!

BUCKEYE BEAMAX

offers "plus" values not found in any other LIQUID FLOOR WAX

- Long wearing!
- Simple to apply!
- Dries quickly!
- No odor!
- Requires no polishing!
- Use dry or damp mop!
- For all types of floors!
- Water resistant when dry!
- Uniform quality!
- Surface adherence!
- Complete coverage!
- Stable emulsion!
- Will not solidify in storage!

REALLY TOUGH!

Protects floors where most hard wear occurs!

Highly efficient and economical Buckeye Beamax dries in just a few minutes to a hard, lustrous finish without polishing! Thousands are finding Buckeye Beamax the finest for use on all types of floors:

rubber • linoleum • rubber tile

asphalt tile • mastic • terrazzo and cement

SSC No. 653

The DAVIES-YOUNG SOAP COMPANY
P. O. Box 995, Dayton 1, Ohio

- ☐ Send Further Information.
- ☐ Send Free Sample of "Beamax".
- ☐ Have your representative call on me.

Name _____

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D·Y QUALITY Since 1844

THE DAVIES-YOUNG SOAP COMPANY

P. O. BOX 995 • DAYTON, OHIO

secretary, and Ellis Merkl, comptroller.

Novel Cleaner Package

"Wall-Kleen Krystals" now come packaged in new two-ounce moistureproof envelopes, it was announced recently by Ross & Story Products Corp., Syracuse, N. Y. The manufacturer says that the measured package eliminates wastage of cleaning materials by workers using more than required and by careless spilling. Contents of a two-ounce envelope is the exact amount to mix with two gallons of water for general purpose hand cleaning of walls and other surfaces. Also, "W.K.K." comes packed in 400 pre-measured two-ounce envelopes in each 50 pound drum which produces 800 gallons of usable cleaning solution.

Reclassifies Powdered Soap

Special powdered soap henceforth will be entered into Peru, S. A. under its new tariff classification No. 1048A, which reads "special powdered soap for the manufacture of toothpaste," dutiable at three soles a gross kilogram, it was announced recently by the U. S. Department of Commerce, Washington, D. C.

"Soap under this tariff classification must be made with a base of palm oil with the addition of cocoanut oil, with neutral reaction, odorless, pulverized, and sifted to such an extent that 90 percent passes through a No. 200 screen and 98 to 99 percent passes a No. 150 screen," an explanatory note states. Formerly powdered soap of this type, which is used in the manufacture of toothpaste, was classified under tariff item No. 1048 with a duty rate of six soles.

1951 Soap Census Report

The value of soap and allied products shipped during 1951, 1950 and 1947, based on manufacturers reports, was published recently by the Bureau of the Census of the U. S. Department of Commerce, Washington, D. C. Value of shipments of soap and glycerine, in thousands of dollars, for these years was as follows: 1951, 782,480; 1950, 725,832; 1947, 927,058. Glycerine—1951, 106,963; 1950, 69,714; 1947, 88,576. Soap—1951, 639,053; 1950, 620,179; 1947, 806,030. Cleaning and polishing preparations—1951, 749,433; 1950, 621,198; 1947, 337,195. Synthetic organic detergents, packaged and bulk—1951, 400,353; 1950, 306,157; 1947, 134,768. Hair preparations (including shampoos)—1951, 142,784; 1950, 128,251; 1947, 92,298. Dentifrices—1951, 93,461; 1950, 87,330; 1947, 79,426. Insecticides and fungicides—1951, 250,960; 1950, 185,468; 1947, 77,904.

Representatives at the recent chemical sales meeting of Emery Industries, Inc., Cincinnati, included this year several field men as well as sales personnel. The week-long meeting of Emery men, shown here, featured the awarding of 16 prizes to the winners of an "idea" contest for sales promotion and advertising, and a visit to Emery's new ozone-oxidation plant for producing dibasic azelaic acid and monobasic pelargonic acid. Top prizes in the contest went to D. R. Eagleson, Chicago; F. L. Ekstrand, Philadelphia; L. J. Hodobas, Los Angeles; and H. D. Armitage, New York, in that order.

Hercules Moves L. A. Office

The removal of its Los Angeles offices from 1151 South Broadway to 3460 Wilshire Blvd., was announced recently by Hercules Powder Co., Wilmington, Del.

Watson Joins Rhodia, Inc.

Rhodia, Inc., New York, has appointed Rupert C. Watson as manager of its re-established department for the sale of aromatic chemicals, perfume specialties and bases, according to a recent announcement by Raymond J. Picard, president. Mr. Watson brings to his new connection a background of 24 years experience in the aromatic sales field.

The Rhodia organization was established and incorporated in New York in 1948 with Mr. Picard as president. Up to the present, the business has been devoted primarily to pharmaceuticals, chemicals and plastics. Rhodia, Inc. of New York is American affiliate of "Rhodia" of Europe, known as Societe des Usines Chimiques Rhone-Poulenc with headquarters in Paris.

RAYMOND J. PICARD

RUPERT WATSON

TRITON X-100

cleans many surfaces...

it removes soil effectively

it prevents resoiling

Soil removal and the prevention of its redeposition are two basic requirements of a successful detergent.

TRITON X-100, Rohm & Haas nonionic detergent, is unique in its ability to perform these two functions simultaneously on a wide range of surfaces. Because it is able to wet many materials *preferentially* it quickly displaces soil from them. As fast as the soil is removed it is dispersed—and held in suspension. Resoiling of the surfaces being cleaned—such as silverware, glasses, floors, enameled metal, chinaware, walls or metal parts, is thus held to a minimum.

The photograph shows the results of a "Dynamic Detergency Test" comparing TRITON X-100 with an anionic and a cationic on a representative metal substrate. TRITON X-100 removes the soil and holds it in suspension; the substrate is sparkling clean. The anionic is less effective as a soil remover. The cationic has removed some soil but has allowed its redeposition on glass. Results from similar tests on a number of substrates are tabulated at right.

The laboratory results obtained with the Rohm & Haas Dynamic Detergency Test have been confirmed in practice. Satisfied users know that TRITON X-100 does its cleaning job with a high degree of effectiveness on many different surfaces. Among them are the following: Aluminum, brass, ceramic tile, copper, enamel, glass, hard rubber, linoleum, steels (cold rolled, furniture, stainless, phosphatized, rust proof), and zinc.

TRITON is a trademark Reg. U.S. Pat. Off. and in principal foreign countries.

The outstanding over-all efficiency of TRITON X-100 in cleaning so many different kinds of surfaces highlights its versatility. Manufacturers of metal cleaners, janitorial supplies, laundry detergents, restaurant and household cleaners and similar products will benefit by writing us for additional information on TRITON X-100.

CLEANING EFFICIENCY
(Dynamic Detergency Test)*

	TRITON X-100	ANIONIC	CATIONIC
	REMOVAL OF SOIL		
Glass	90%	73%	15%
Ceramic Tile	83	53	12
Mild Steel	82	35	58
Brass	78	34	46
Aluminum	72	22	70
Linoleum	64	26	20
Melamine Plastic	59	25	22
	PREVENTION OF REDEPOSITION		
Glass	99%	98%	20%
Ceramic Tile	97	87	12
Mild Steel	93	78	92
Brass	90	68	70
Aluminum	97	74	77
Linoleum	90	60	24
Melamine Plastic	81	39	58

**Refer to Soap & Sanitary Chemicals 29 (2) 46, 1953, or write Rohm & Haas Company for reprint of article "Nonionics—The All-Surface Cleaners".*

CHEMICALS FOR INDUSTRY

ROHM & HAAS COMPANY

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representatives in principal foreign countries

Chew 50 Year Dinner

John A. Chew, president of John A. Chew, Inc., of New York, was the guest of honor at a testimonial

JOHN A. CHEW

dinner given by 400 of his friends and associates in the chemical industry at the Hotel Roosevelt, New York, on May 26. The dinner marked the completion of fifty years in the chemical business by Mr. Chew. Louis A. Neuberg, vice-president of Westvaco Chemical Division of Food Machinery, acted as toastmaster. Former U. S. Senator A. W. Hawkes of New Jersey made the presentation of a gift of Swedish glass to Mr. Chew.

A symposium of short addresses by representatives of various parts of the industry was included in the program. The Choral Group of the Chemical Salesmen's Association sang a group of Mr. Chew's favorite songs. Joseph M. Wafer, director of sales of Industrial Chemical Sales Division of West Virginia Pulp & Paper was chairman of the dinner committee, and W. J. Weed, vice-president of Niagara Alkali was co-chairman. Mr. Chew began his career in the chemical business with Rosengarten & Co., later Powers-Weightman-Rosengarten Co. which was absorbed by Merck & Co., in 1903.

Erratum

In the caption for the photograph of "Swish" auto wax appearing on page 57 of the April issue the name of the manufacturer should have been given as R. L. Carlisle Chemical and Manufacturing Co., Brooklyn.

Guernsey Joins Universal

Appointment of F. H. Guernsey as Eastern sales representative for Universal Detergents, Inc., Long

F. H. GUERNSEY

Beach, Calif., was announced recently by B. R. Bryant, general manager. Mr. Guernsey is making his headquarters in New York.

Purex Declares Dividend

Purex Corp., South Gate, Calif., recently declared a dividend of 15 cents a share, payable June 30.

De Laire Opens U. S. Office

New offices of de Laire Inc., makers of perfume specialties and aromatic chemicals, were opened at

LOUIS BEZARD

114 East 32 St., New York, it was announced recently by Louis Bezard, president. Francois de Laire, general director of Fabriques de Laire, Issy, France, attended the official opening of the headquarters. He returned to Paris after a four weeks visit in New York.

Burding in New Lever Post

Election of Warren N. Burding as marketing vice-president of the Lever division, and Robert G. Spears as marketing vice-president of the Good Luck division, was announced recently by Lever Brothers Co., New York. Mr. Burding was formerly president of the Good Luck division, and Mr. Spears was vice-president and general manager of the division. In his new position, Mr. Burding is in charge of domestic marketing of consumer soaps, synthetic detergents and shortening. He succeeds J. Lawrence Dampier, who has taken a leave of absence due to illness. Prior to joining Lever in 1949, Mr. Burding was vice-president in charge of the grocery division of Standard Brands, Inc., New York.

ROBERT G. SPEARS

WARREN N. BURDING

special Filtrol 1st choice with animal fat and oil processors

FACTS EVERY ANIMAL FAT AND OIL PROCESSOR SHOULD KNOW:

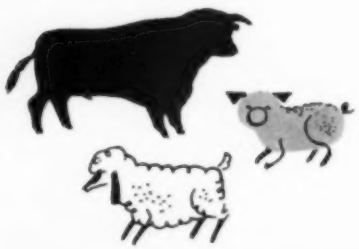
1. Special Filtrol's unexcelled decolorizing power makes it the best adsorbent for meeting the exacting color specifications of the trade.

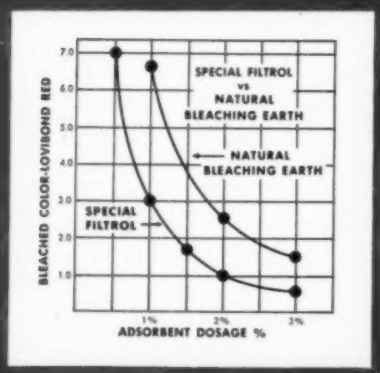
2. Special Filtrol has the lowest oil retention and the fastest filtration rate of any activated adsorbent.

3. Special Filtrol produces excellent color stability.

4. Special Filtrol is the standard activated adsorbent of the American Oil Chemists' Society.

5. Filtrol Corporation offers complete laboratory facilities and trained technicians to assist fat and oil processors with their decolorizing problems.





FILTROL CORPORATION

GENERAL OFFICES:
727 West 7th Street, Los Angeles 17, California
PLANTS:
Vernon, Calif., Jackson, Miss., Salt Lake City, Utah

*T.M. REG. U.S. PAT. OFF.

FILTROL ADSORBENTS FIRST CHOICE WITH ALL FAT AND OIL PROCESSORS

Bids and AWARDS

Wax Award to Trio

The award on 4,000 pounds of floor wax in a recent opening for miscellaneous supplies by the Federal Supply Service, Cleveland, Ohio, was won by Trio Chemical Works, Brooklyn, with a bid of 16 cents per pound.

Babbitt Gets FSS Award

B. T. Babbitt, New York, won the award on 14,832 lbs. of scouring powder with a bid of 6/7 cents, in a recent opening for miscellaneous supplies by the Federal Supply Service, Dallas.

P & G Is Lowest Bidder

The lowest bid of 5.65 cents on 65,100 pounds of soap chips, included in a recent opening for miscellaneous supplies by the Federal Supply Service, Washington, D. C., was submitted by Procter & Gamble, Cincinnati.

FSS Low Bids

A recent opening for miscellaneous supplies by the Federal Supply Service, New York, included item 1, 30,000 pounds of scouring powder, and item 2, 38,304 pounds of soap powder. Pal Products Manufacturing Corp., Brooklyn, submitted the lowest bid of 4.59 cents on item 1; Stevens Soap Corp., Brooklyn, lowest bid of 3.56 cents on item 2.

FSS Soap Paste Bid

The lowest bid of $6.90 on 150 drums of soap paste, approximately 100 pounds each, was submitted by National Chemical Laboratories, Philadelphia, in a recent opening for miscellaneous supplies by the Federal Supply Service, New York.

Metal Polish Bid

A recent opening for miscellaneous supplies by Navy Purchasing Office, New York, included a bid for 125,700 one-pint units of metal polish for destinations a, Newport, b, Norfolk, c, Cherry Point. Lowest bids were submitted by R. M. Hollingshead Corp., Camden, N. J., on item a, 10.76 cents, b, 10.43 cents, and c, 11.56 cents, f.o.b. Philadelphia 9.6 cents.

QM Paste Soap Award

The award on 379,580 pounds of paste soap, included in a recent opening for miscellaneous supplies by the Quartermaster Purchasing Office, New York, went to National Chemical Laboratories, Philadelphia, with a bid of $27,235.53.

B & M Lowest Bidder

Baird & McGuire, Holbrook, Mass., submitted the lowest bid of 45 cents on 3,900 gallons of liquid toilet soap included in a recent opening for miscellaneous supplies by the General Services Administration, Washington, D. C.

Borax Co. Wins FSS Award

The award on 8,000 cartons of soap in a recent opening for miscellaneous supplies by the Federal Supply Service, Dallas, Tex., was won by Pacific Coast Borax Co., Los Angeles, with a bid of 58.8 cents.

Low Bid on Liquid Soap

A recent opening for miscellaneous supplies by the General Services Administration, Washington, D. C., included 9,020 gallons of liquid soap. Lowest bid of 28.8 cents was submitted by Crystal Soap and Chemical Co., Philadelphia.

Navy Insect Repellent Bid

The Navy Purchasing Office, New York, included a bid for 206,250 gallons of insect repellent in a recent opening for miscellaneous supplies. Montrose Chemical Co., Newark, N. J., was lowest bidder with $8.24.

Shaving Soap Awards

A recent opening for miscellaneous supplies by the Veterans Administration, Washington, D. C., included 6,912 cans of shaving soap. Awards went to Boyle-Midway, New York, with a bid of 32.75 cents each on items 1, 2 & 3, and to G. Barr & Co., Chicago, with a bid of 40.58 cents on item 4, 41.5 cents on item 5, and 37.58 cents on item 6.

Cleaner Award To Texo

In a recent opening for miscellaneous supplies by Hunter Air Force Base, Ga., the award on 2,500 gallons of metal cleaner went to Texo Corp., Cincinnati, with a bid of $1.29.

Low Navy Soap Bid

Pacific Coast Borax Co., Los Angeles, submitted the lowest bid of 6.094 cents on 100,000 pounds of borax soap compound in a recent opening for miscellaneous supplies by the Navy Purchasing Office, New York.

Low Harley Soap Bid

A recent opening for miscellaneous supplies by the General Services Administration, Washington, D. C., included 30,000 pounds of soap paste. Lowest bidder was Harley Soap Co., Philadelphia, with 6.85 cents.

GSA DDT Aerosol Bids

General Services Administration, Washington, D. C., included 5,148 DDT aerosol dispensers in a recent opening for miscellaneous supplies. Tru-Pine Co., Chicago, was lowest bidder with 45 cents.

Perfumers Fete Lambert

The American Society of Perfumers recently held a testimonial dinner in honor of William Lambert, editor of *American Perfumer and Essential Oil Review*, at the Advertising Club, New York.

Gair Names Meelfeld

Appointment of Paul C. Meelfeld as sales promotion manager for the container operations division of Robert Gair Co., New York, was announced recently by William T. May, Jr., vice-president in charge of container operations. Mr. Meelfeld was formerly assistant vice-president in charge of advertising and sales promotion at Hinde and Dauch Paper Co., Sandusky, O.

How to Bag a Sales Increase!

Track down the right fragrance for your product. And you can do it by calling our nearest office. Our experts will gladly search from Abyssinia to Zanzibar for the *one* fragrance that whispers "buy" to your prospects.

Write, or call us—soon!

NAUGAROMES—For various industrial and commercial uses.

SOAPOLS—For bar, paste and liquid soaps.

SHAMPAROMES—For liquid, cream and paste shampoos.

MODERN BASES—For fine perfumes, colognes, toilet waters, toilet preparations, etc.

CREAMODORS—For all types of creams and lotions.

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NEW Trade Marks

THE following trade marks were published in recent issues of the *Official Gazette* of the U. S. Patent Office in compliance with section 12(a) of the Trade Mark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the *Gazette*. See rules 20.1 to 20.5. As provided by section 31 of the Act, a fee of $25 must accompany notice of opposition.

Co-b-ney—This for wax polish for use on objects of wood, metal, leather, and plastic. Filed Mar. 14, 1952 by Gaffney Brothers Co., Charlotte, N. C. Claims use since Aug. 6, 1951.

Immunol—This for rust preventive. Filed Feb. 27, 1952 by Haas Miller Corp., Philadelphia. Claims use since Apr. 19, 1946.

Rocloth—This for cloth impregnated with a germicidal, bactericidal agent for a general use in sanitizing. Filed Mar. 24, 1952 by Sterwin Chemicals, Inc., New York. Claims use since Mar. 6, 1952.

Nopcocide—This for quaternary ammonium salts for use in the preparation of disinfectants, germicides, and fungicides. Filed May 3, 1952 by Nopco Chemical Co., Harrison, N. J. Claims use since Aug. 27, 1948.

Nib—This for granulated detergent for household use. Filed Oct. 4, 1951 by Colgate-Palmolive-Peet Co., Jersey City, N. J. Claims use since Sept. 6, 1951.

Neutral 50—This for powdered detergent. Filed Dec. 28, 1951 by Diamond Alkali Co., Cleveland. Claims use since Mar. 28, 1951.

Jenny—This for detergent and soap compound for use in steam cleaning spraying machines. Filed Nov. 4, 1950 by Homestead Valve Manufacturing Co., Coraopolis, Pa. Claims use since Dec. 14, 1938.

Kay-o-mist—This for insecticide. Filed Jan. 21, 1950 by Knapp-Monarch Co., St. Louis. Claims use since Dec. 23, 1949.

d-Con Mouse-Prufe—This for rodenticide. Filed Mar. 4, 1952 by d-Con Co., Chicago. Claims use since Feb. 23, 1951.

Nitrox—This for insecticides. Filed Sept. 29, 1952 by Chemagro Corp., New York. Claims use since July 11, 1952.

Tide's in-dirt's out!—This for sudsing soap-like detergent. Filed Apr. 7, 1948 by Procter & Gamble Co., Cincinnati. Claims use since October 1946.

Synetic Suds—This for synthetic powdered soap. Filed July 31, 1950 by Grace-Lee Products, Inc., Minneapolis. Claims use since on or about Feb. 23, 1949.

Lurex—This for comminuted vegetable substance admixed as an attractant with a rodenticide. Filed Dec. 6, 1950 by d-Con Co., Chicago. Claims use since November 1950.

End-o-moth—This for moth insecticides. Filed Sept. 7, 1951. Interstate Engineering Corp., El Segundo, Calif. Claims use since Aug. 7, 1951.

d-Con LX 3-2-1—This for rodenticides. Filed Nov. 29, 1951 by d-Con Co., Chicago. Claims use since Sept. 9, 1951.

Banfly—This for insect repellent used in direct application to the skin. Filed Jan. 19, 1952 by William M. Foord, Litchfield, Conn. Claims use since May 4, 1940.

West Vapodco—This for deodorant preparation in cake form for urinals and water closets. Filed Feb. 18, 1952 by West Disinfecting Co., Long Island City, N. Y. Claims use since Apr. 1, 1915.

Chapman—This for insecticides, fungicides, etc. Filed Oct. 11, 1952 by Chapman Chemical Co., Memphis, Tenn. Claims use since Aug. 1, 1946.

Dry-deck—This for liquid absorbent and floor sweeping compound. Filed Feb. 25, 1949 by Wyandotte Chemicals Corp., Wyandotte, Mich. Claims use since May 22, 1947.

Lift—This for sudsing packaged detergent in powdered form for washing dishes, laundering clothes, and other general cleaning purposes. Filed July 16, 1950 by Armour and Co., Chicago. Claims use since June 14, 1950.

Instant — This for shampoo. Filed Mar. 4, 1952 by Lander Co., New York. Claims use since Feb. 27, 1952

Minwax — This for polishing and finishing waxes in paste and liquid form. Filed May 31, 1952 by Minwax Co., New York. Claims use since 1923.

Bridgeport — This for insecticides and deodorants. Filed Feb. 14, 1952 by Bridgeport Brass Co., Bridgeport, Conn. Claims use since Mar. 4, 1946.

Pleez-aire — This for preparation for use as a household deodorant and disinfectant. Filed Mar. 5, 1952 by Martin Products, Wilmette, Ill. Claims use since October 1951.

HL-636 — This for insecticides. Filed Nov. 4, 1952 by California Spray-Chemical Corp., Richmond, Calif. Claims use since Sept. 10, 1952.

Solvolith—This for toothpaste. Filed Oct. 7, 1949 by Extraction & Chemical Co., New York. Claims use since 1935.

Lien—This for liquid cleaner. Filed Dec. 24, 1949 by Lien Chemical Co., Franklin Park, Ill. Claims use since May 10, 1947.

Hy-sorb—This for floor sweeping compound. Filed Jan. 3, 1951 by Johns-Manville Corp., New York. Claims use since Sept. 18, 1950.

Hot Dog—This for soap. Filed Feb. 5, 1952 by Mem Co., New York. Claims use since July 19, 1951.

Dencotar—This for hair and scalp shampoo. Filed July 22, 1952 by Denver Chemical Manufacturing Co., New York. Claims use since Aug. 10, 1951.

Blue Devil—This for mechanic grease cleaner. Filed Sept. 22, 1952 by A. Maher & Son, St. Louis. Claims use since May 1945.

Calamity Jane—This for soaps. Filed Aug. 20, 1951 by Donald Barry Productions, Inc., Los Angeles, Calif. Claims use since July 5, 1951.

Brigade — This for sudsing cleaner, cleanser, and detergent. Filed Feb. 14, 1952 by Procter & Gamble Co., Cincinnati. Claims use since Jan. 14, 1952.

Ditran—This for cleaning utensils and machinery. Filed Feb. 28, 1952 by Diversey Corp., Chicago. Claims use since Jan. 2, 1952.

Wyandotte Lab.

(*From Page* 49)

partment is concerned with light and heavy duty cleaning in the metals industries. Among its equipment are burnishing barrels, an industrial sized buffing lathe, and a series of cleaning, electrocleaning and electroplating tanks.

Looking into the future, Mr. Vaughn forecast development of new germicides and detergents, as well as other products. Application work on agents for industrial cleaning needs and information gained from the fundamental studies of the action of such cleaners using radioactive tracer techniques in Wyandotte's own nucleonics laboratory are leading to the development of new and improved products. One group of these products is expected to reduce rejects in commercial plating and painting operations by providing clean surfaces to which the plate and the paint film will show greater adhesion. More effective germicidal rinses for the food and beverage serving establishment are foreseen, and for the laundry and textile field a new size is being developed which imparts greater resiliency, less stiffness and a better hand.

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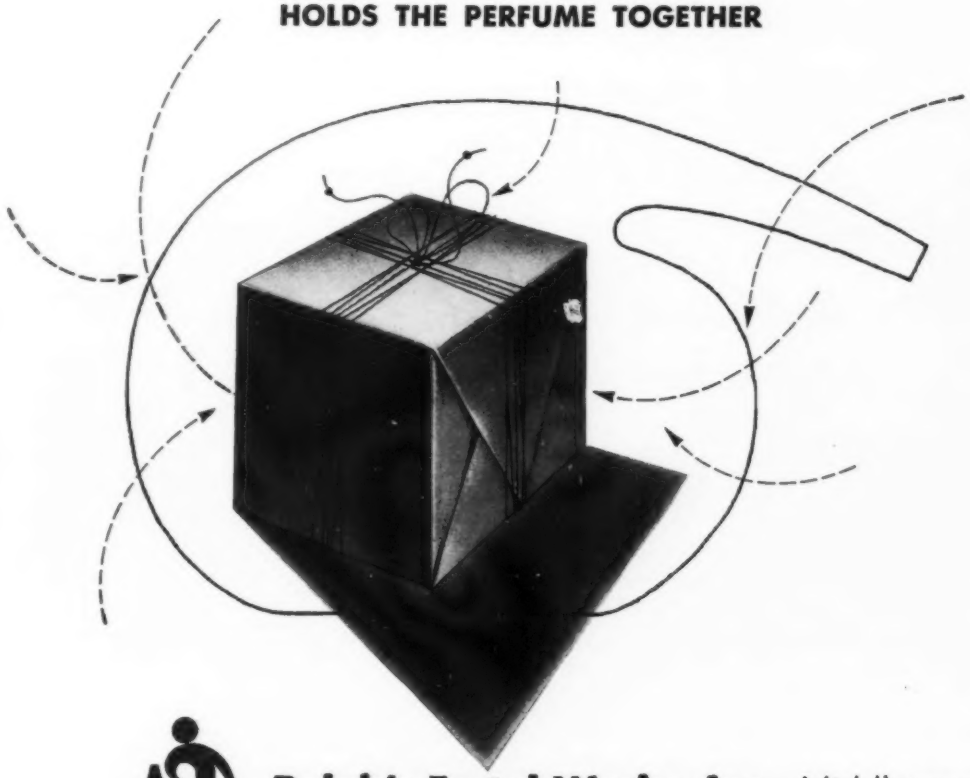
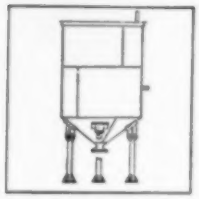


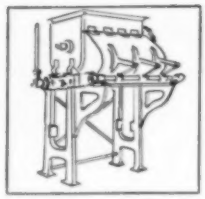
Polak's Frutal Works, Inc., Middletown, New York

*Domestic and Foreign Patents applied for.

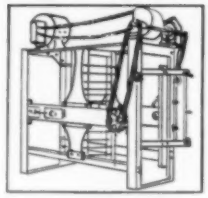


KETTLES

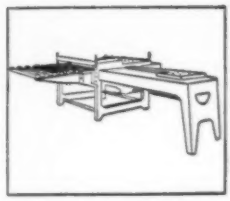
CRUTCHERS



AMALGAMATORS



SLABBERS

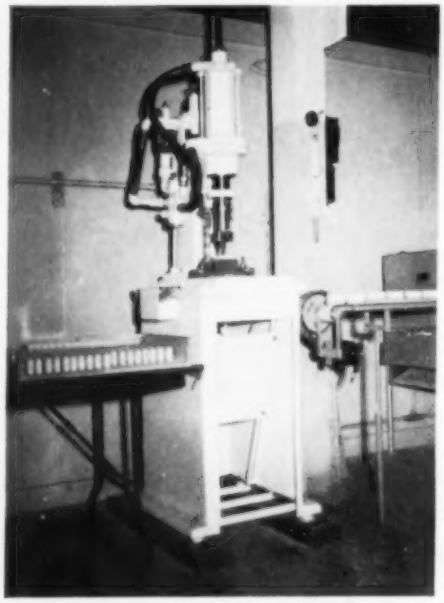


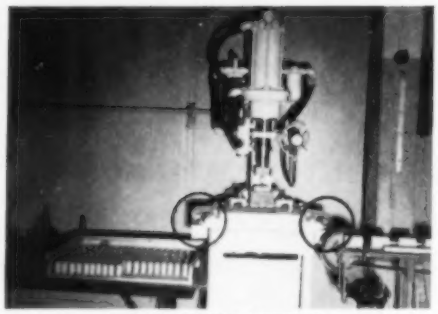
L-S CUTTERS

For Higher Production without Accidents— Install

HOUCHIN "SAFETY" AIR PRESS

Patented U. S. A. and other countries.
Houchin Machinery Co., Inc.
Manufacturing Licensees





NEW IMPROVED MODEL B

Note the safety automatic hand levers on each side of the press, away from the die position. Both hands must be used to depress the right and left hand control levers simultaneously in order that the air ram may function.

HOUCHIN builds all the kindred machinery needed for completely automatic, continuous or intermittent, soap production.

Safety Is Assured. The air ram is locked until the operator moves both hands away from the die box to simultaneously depress the right and left hand valve control levers.

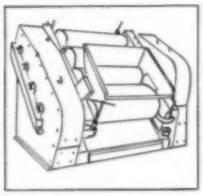
Uniformity of Pressing Is Positive. Dangerous, old fashioned, tiring foot lever controls are eliminated. The operator remains comfortably seated. The actual pressing and ejection operations are, although manually controlled, completely automatic.

Hourly and Daily Production Is Greater. Operators soon learn the simple, safe routine of feeding blanks to either Box or Pin Dies.

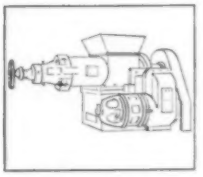
The Element of Human Fatigue is eliminated, with consequent gain in efficiency, speed, and safety of production.

Surface Pressures up to 2500 lbs. are attained by a simple thumb and finger valve adjustment. Either single or multiple air ram strokes are made at will by the operator.

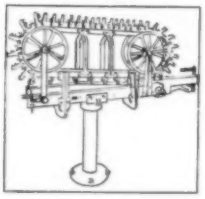
No operator injuries have ever been reported during the four years that this SAFETY AIR PRESS has been on the market.



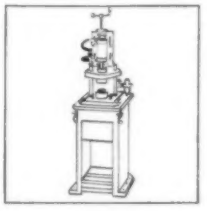
MILLS



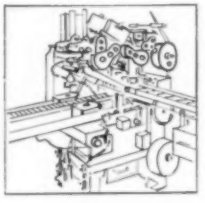
PLODDERS



T-S CUTTERS



PRESSES



WRAPPERS

HOUCHIN MACHINERY CO., INC.

HAWTHORNE, NEW JERSEY, U. S. A.

Manufacturers of Soap Making Machinery for Over a Century

Hand Cleaners

HAND cleaners, based on organic solvents, are marketed in the form of liquefying gels, pastes, creams, or clear solutions. Highly volatile solvents are unsuitable for incorporation in skin cleansers because of excessive defatting action, as well as toxicity and flammability of vapor. A flash point above 100°F is considered relatively safe against fire hazard.

Kerosene, which has been deodorized and which may be further fractionated to eliminate the more volatile constituents, is a low-cost solvent for hand cleaners with a boiling range of 175°-325°C.

Mild odor, easily covered by perfume, makes mineral spirits (heavy naphtha) a suitable solvent. This petroleum distillate has a distillation range of 305°-400°F (152°-205°C), and an ash point of 103°F. Stoddard solvent, prepared to conform to specifications of the U. S. Bureau of Standards for cleaning solvents, is in the same boiling range and equally suitable for the purpose.

High-flash coal tar naphtha is another solvent of mild odor, recommended for use in hand cleaners. It is an excellent solvent for natural and synthetic resins, has a low rate of evaporation, and boils over a narrow range in the vicinity of 180°C.

Among chlorinated solvents, trichloroethylene can be used to good advantage in hand cleaners. Trichloroethylene (boiling point 87°C) is nonflammable, has an odor resembling that of chloroform, and dissolves greases, waxes, and sticky substances such as crude rubber, chewing gum, tar, pitch, vinyl resin, and cellulose ethers. Carbon tetrachloride, while exhibiting similar solvent properties, is a little more volatile. Ortho-dichlorobenzene is of very low volatility and capable of dissolving natural and synthetic resins.

Butyl "Cellosolve" and butyl "Carbitol", trade-named products of Carbide and Carbon Chemicals Corp., two glycol derivatives, are miscible with both mineral oils and water and act as mutual solvents in oi land water mixtures. Incorporated in emulsions, they prevent separation of the phases. Both of these lacquer solvents have a low rate of evaporation and a mild odor. Cyclohexanol (hexalin) is another solvent, helpful in stabilizing hydrocarbon emulsions. It has a menthol-like odor and is slightly toxic.

A preparation for removing adhesive tape, grease, tar, etc., from the skin utilizes a deodorized kerosene fraction mixed with light mineral oil (U. S. patent 2,539,531). The solvent may be thickened by adding enough lanolin to give it a pasty consistency or by adding aluminum stearate to convert it to a gel.

Compositions containing soap or synthetic detergent are easier to rinse off the hands with water. A good cleanser and effective remover of paint, tar, and resins from the skin contains a little lecithin and lanolin to counteract the drying effect of the solvents. It may have the following formula:

Trichloroethylene	40
Propylene glycol	5
Stoddard solvent	20
Lecithin (soy bean)	1
Lanolin	1
Acetone (for dissolving lanolin)	3
Oleic acid	15
Triethanolamine	7.5

A liquid hand cleaner (U. S. patent 2,383,114) incorporates butyl "Cellosolve" as a mutual solvent for the amine soap, dichlorobenzene glycerin, and water. A masking perfume is required to cover the odor of the ortho-dichlorobenzene. The clear yellow liquid product has the following formulation:

Monoethanolamine	5
Oleic acid	23
o-Dichlorobenzene	30
Butyl "Cellosolve"	20
Glycerin	15
Water	7

A liquefying gel-type detergent for removing dirt, grease, and oils from the skin without use of water (U. S. patent 2,567,999) uses "mineral terebinth essence", a petroleum fraction having a boiling range of 130°-190°C. The ingredients, as shown in the following formula, are compounded without heating, the alkaline solutions being added to the mixture of oleic acid and solvents:

Oleic acid	20
Ammonium hydroxide (10%)	8.5
Sodium hydroxide (20%)	5
Mineral terebinth essence	110
Water	15
Glycerin	2

Kerosene may be incorporated in an emulsion cleaner. Other solvents could be substituted for a portion of the kerosene to secure a stronger cleansing action as follows:

A.	
Polyethylene glycol 600 monostearate	6.0
Stearic acid	4.0
Preservative	0.1

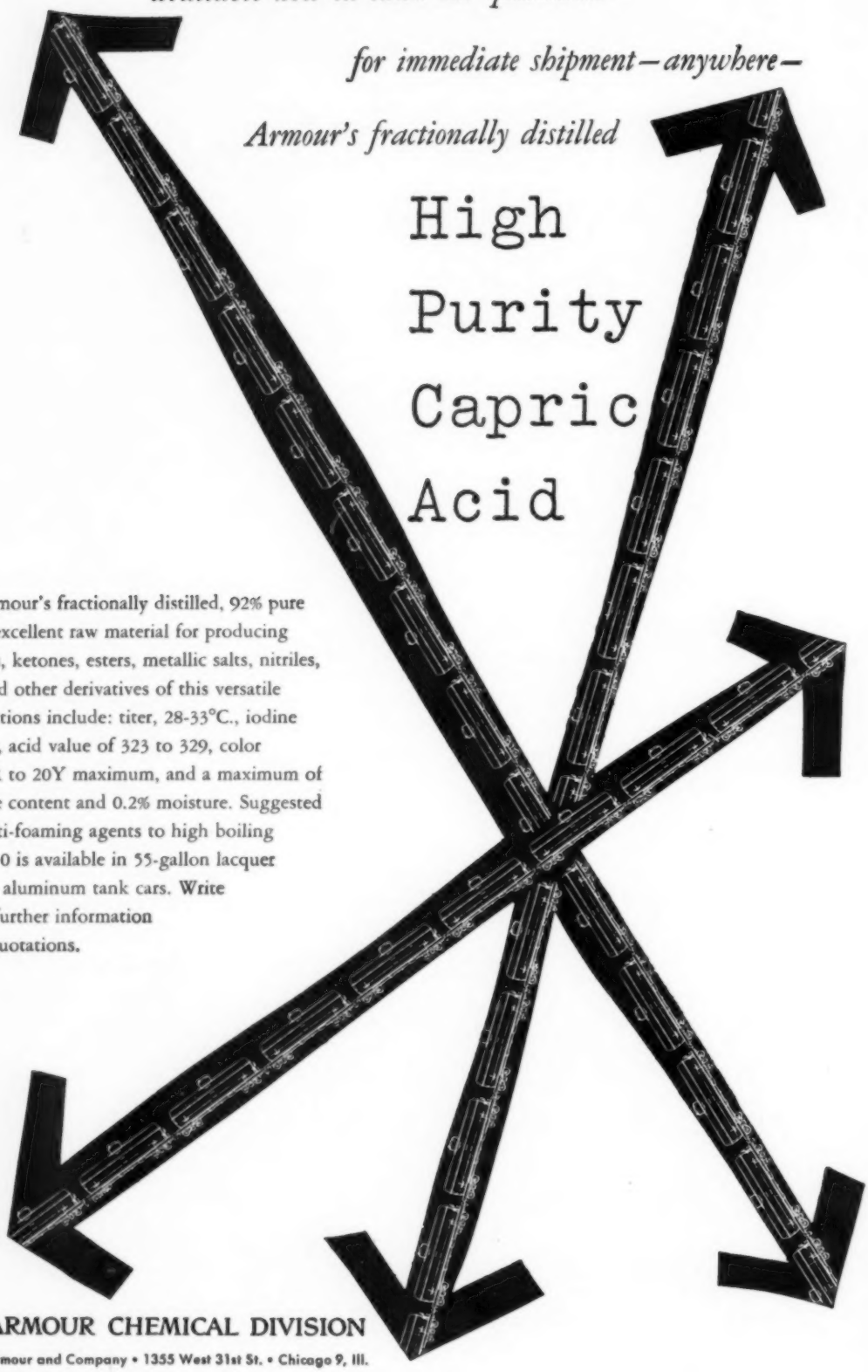
Hand cleaners, made in liquefying gel, paste, cream or in clear solution forms, are based on organic solvents. Flash point should be above 100° F. Soap or syndet cleansers rinse easily.

available now in tank car quantities—

for immediate shipment—anywhere—

Armour's fractionally distilled

High Purity Capric Acid



Neo-Fat® 10—Armour's fractionally distilled, 92% pure capric acid—is an excellent raw material for producing alcohols, aldehydes, ketones, esters, metallic salts, nitriles, amides, amines, and other derivatives of this versatile fatty acid. Specifications include: titer, 28-33°C., iodine value of 1 or lower, acid value of 323 to 329, color (Lovibond 5¼") 2R to 20Y maximum, and a maximum of 0.2% unsaponifiable content and 0.2% moisture. Suggested uses range from anti-foaming agents to high boiling solvents. Neo-Fat 10 is available in 55-gallon lacquer lined drums and in aluminum tank cars. Write Armour today for further information and current price quotations.

ARMOUR CHEMICAL DIVISION

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Kerosene	50.4
Polyethylene glycol 300 distearate	6.0
B.	
Water	27.0
Triethanolamine	6.5

Procedure: Heat A and B to 50° C. in separate containers. Add B to A while stirring. Add perfume at 45° and stir as it cools.

One of the major problems in the formulation of a solvent hand cleaner is the masking of the solvent odor. Solvents of mild odor should therefore be selected, and it should be remembered that some perfumes cover the solvent odor effectively in the jar, but fail to do so once the product is rubbed on the hands. *Schimmel Briefs*, March, 1953.

D.C.M.X. and G-11 in Soap

A COMPARISON of D.C.M.X. and hexachlorophene as soap germicides is made by J. W. Lord and E. Parker, J. Bibby & Sons, Ltd., Liverpool, England, in a paper appearing in the May issue of *Soap, Perfumery & Cosmetics*. Both in vitro and in vivo experiments were carried out, using throughout D.C.M.X. (2.4.dichlorosym.m-xylenol) at a level of 2.5 percent and in some cases five percent added to a toilet soap base at the milling stage. Toilet soap containing two percent hexachlorophene was used as a comparison and unmedicated toilet soap as a control. The in vitro tests were of two kinds, namely the Rideal-Walker coefficient carried out using a standard technique with the D.C.M.X. in the presence and in the absence of excess soap (experiment I) and the zone of inhibition technique using pellets of soap 10 mm. in diameter set in the medium and also filter paper discs 10 mm. in diameter dipped in 10 percent soap solutions and dried (experiment II). Throughout these tests the inoculum used was a 4-hour broth culture of the Oxford staphylococcus.

The first in vivo experiment was an attempt to simulate the method of Gemmell. This was abandoned in favor of the contact-culture method described in detail by Best. Other in vivo experiments were carried out after a preparatory period of eight to ten days during which the soap under test was used exclusively. The methods employed were those of Cade and Best. A summary of the experimental methods used follows.

The in vitro experiments so far carried out by the authors and those described by Gump and Cade have been restricted to gram-positive organisms, because it seems to be generally accepted that the normal resident skin flora with which this investigation is mainly concerned consists predominantly of gram-positive cocci.

In the present in vitro tests the value of D.C.M.X. itself as a germicide is indicated by the Rideal-Walker coefficient of about 70 against the Oxford staphylococcus, although this value is much lower than the one claimed by Gemmell (180) against S. Aureus of a different strain. Both types of in vitro tests confirmed Gump and Cade in showing that, whatever the value of D.C.M.X. itself might be, in the presence of excess soap its germicidal activity is very much reduced, whereas under the same conditions, that of hexachlorophene remains unimpaired.

In vivo trials were carried out with two objects in view: a) to check Gemmell's claim that the use of D.C.M.X. soap brings about a retardation of the build-up of the skin flora even after a single wash and b) to study the value of regular use of D.C.M.X. soap in reducing the skin flora. The retarded build-up of the skin flora claimed by Gemmell could be due to a true reduction of the number of organisms on the skin by the continued action for some hours of adsorbed D.C.M.X. Alternatively, the low counts on the D.C.M.X. and hexachlorophene plates could be due to partial inhibition of growth caused by a carry-over of germicide from the skin to the plate during swabbing.

Results parallel to those of Gemmell were obtained only whenever nutrient agar (as opposed to blood agar) was used. This observation is held to indicate that Gemmell's results may well be due to carry over of germicide from the skin to the plates. Since the counts using blood agar plates (in which the serum inhibits the action of any germicide carried over) are very similar at any selected time after washing, whichever type of soap be used, the organisms present on the skin must clearly be viable, and would continue to thrive and multiply if transferred to a suitable environment whether by design or accident. It cannot therefore be accepted that a single wash with a germicidal soap achieves anything more than would ordinary soap. To be effective, germicidal soaps must be used regularly and faithfully.

Testing the skin after regular and exclusive use of the experimental germicidal soaps for a period of eight to ten days demonstrated clearly that at approximately the same level in soaps, D.C.M.X. is inferior to hexachlorophene as a skin germicide. Even at a level of five percent D.C.M.X. fails to give plate counts as low as two percent hexachlorophene, although they were shown statistically to be lower than those of the control soap.

New Palmitic Acid Standard

The Toilet Goods Assn., New York, recently issued its suggested standards Nos. 50 to 55, to be used as minimum standards for Palmitic Acid 70 percent to 95 percent.

New Attapulgus Extender

Attapulgus Minerals & Chemicals Corp., Philadelphia, recently introduced "Attasorb", a fine, free-flowing powder derived from attapulgite, a hydrated magnesium aluminum silicate. High sorptivity, chemical inertness, lightweight, and ability to wet and disperse readily and to form a stable suspension in aqueous and organic liquids are among the properties claimed for this product. According to the manufacturer the powder shows good performance as a polishing agent and is generally suitable as a bodying agent, filler, extender, strengthener, or anti-blocking agent. "Attasorb" costs 2½ cents to 3½ cents per pound, depending upon freight charges. Detailed data, technical assistance, and free samples are available.

STEPAN CHEMICAL COMPANY

Announces NEW line of...

FATTY ALCOHOLS

and Fatty Alcohol Sulfates

The new line of Stepan higher fatty alcohols are now available for your trial. These new fatty alcohols from tallow, soya, fish, and linseed oils lend themselves to a wide range of applications including use as emollients, emulsifiers, absorption bases, intermediates, penetrants, thickeners, etc.

SULFATES of these fatty alcohols, because of their excellent detergent qualities combined with low defatting of the skin, will be of particular interest for use in shampoos, heavy-duty household detergents, and other detergents in either liquid or solid form. These Stepan fatty alcohol sulfates are available in a variety of forms as sodium salts or alkylolamine salts.

Tentative specifications for the Stepan primary Makanols (higher fatty alcohols) are given below. Chlorides and bromides of these primary Makanols are also available.

All Stepan Makanols can be obtained in commercial quantities based on semi-works unit production. Their derivatives can be obtained in laboratory or pilot plant quantities.

TENTATIVE SPECIFICATIONS

	% Myristyl Alcohol	% Cetyl Alcohol	% Stearyl Alcohol	% Oleyl Alcohol	% Linoleyl Alcohol	Iodine No.	Saponification Value	Titer
MAKANOL I	6	27	15	50	2	55	2	42
MAKANOL II	6	27	67	..	..	4	2	52

SUGGESTED USES

- Emollients
- Emulsifiers
- Oil Additives
- Chemical Intermediates
- Esters
- Plasticizers
- Mold Release Agents
- Rust Preventatives
- Textile Sizings
- Leather Stuffing
- Resins
- Metal Plating
- Wax Compounding
- Wetting Agents and Detergents
- Lubricants
- Emulsion Stabilizers
- Adherents in Cosmetics

Write for free Samples...

THE **STEPAN** **CHEMICAL CO.**

3250 So. Kedzie Avenue
Chicago 23, Illinois

FATTY ALCOHOLS • FATTY ALCOHOL SULFATES • BULK LIQUID DETERGENTS • SULFONATED OILS • SPECIALTY CHEMICALS

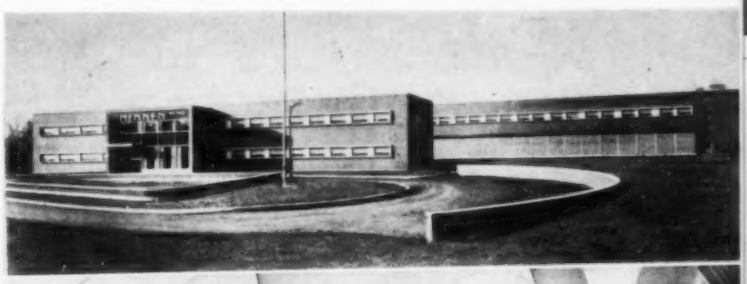
Mennen Opens New Plant

MENNEN CO. opened its new plant on Hanover Ave., Morris Township, N. J., May 11, with an official ceremony in which federal, state and local officials participated.

The new Mennen plant houses all manufacturing, warehousing and administrative offices under one roof, and provides 264,000 square feet of which 55,000 are for manufacturing. Among the building's many features is an entirely new power manufacturing system. Under the system, control stations are set up on the manufacturing floor. Liquid ingredients such as alcohol, mineral oil, and glycerine are piped through meters to control stations. By consolidating valves, meters, gauges, push button station and other controls at the stations, several manufacturing processes can be controlled from one spot with less than the normal number of operating personnel.

The plant combines on a single floor warehouse, receiving, storing, "order make up" and shipping on the same level with packaging, maintenance, machine service, personnel offices, cafeteria, kitchen, first aid, and several other administrative functions.

Laboratory and product manufacturing facilities are located in a second floor section directly over the packaging room for gravity feed to packing lines below. Storage of materials in the warehouse is arranged according to type. Palletizing of ingredients, packaging materials and finished goods unifies handling methods and equipment. The U-shaped packaging lines, are virtually automatic. Lines are lagged in, but each of them can be modified to meet product or promotion-minded modifications. Gravity feed control lines, from the floor overhead, are keyed to the actual take-off capacity of the can, bottle, or tube-filling stations.



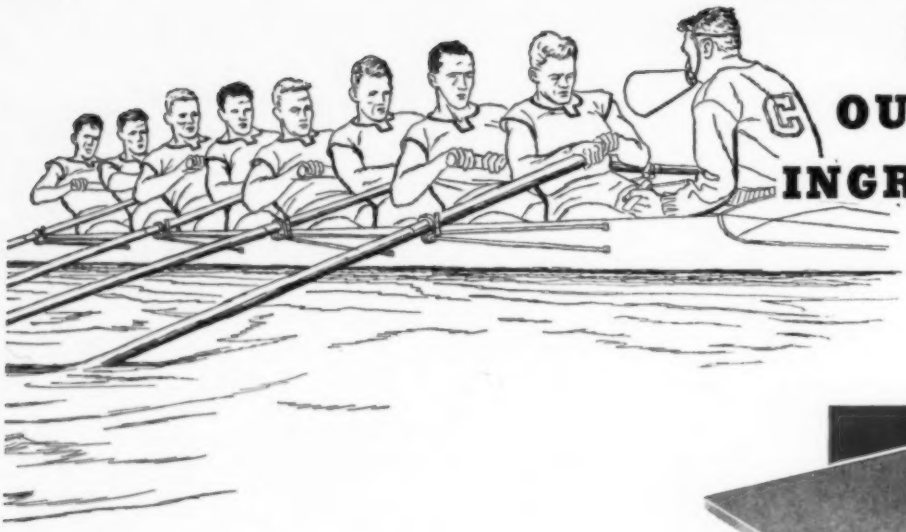
Exterior view of front of new plant and headquarters of Mennen Co. of Morris Township, N. J. New plant provides 264,000 square feet of floor space.

Photo at right, center, is of tube filling station for the company's shave cream.

Sampling at a kettle of shave cream in the new Mennen plant is shown in photo at bottom, right.

William G. Mennen, Sr., president, seated at desk with his two sons, George S. Mennen, left, and William G. Mennen, Jr., right, both of whom are vice-presidents.

TEAMWORK IS ONE OF OUR VITAL INGREDIENTS



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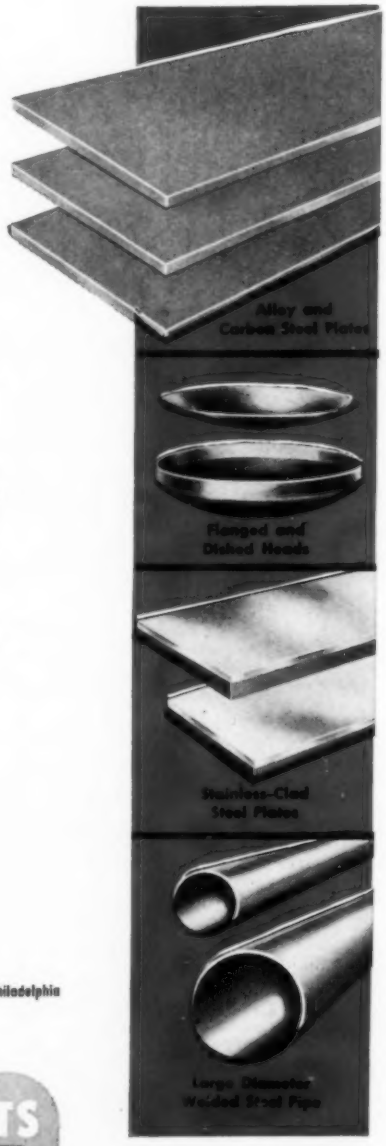

THE COLORADO FUEL AND IRON CORPORATION—Denver, Colorado
THE CALIFORNIA WIRE CLOTH CORPORATION—Oakland, California
WICKWIRE SPENCER STEEL DIVISION—Atlanta • Boston • Buffalo • Chicago • Detroit • New York • Philadelphia
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CLAYMONT STEEL PRODUCTS
PRODUCTS OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORPORATION

Foam Stabilizers

(*From Page* 48)

consistency or "viscosity" of foams by measuring the torque required to rotate a spindle through the mass of bubbles, as described by Scott and Thompson (3). Tests of this kind were carried out by fastening a one-inch length of copper wire horizontally to the No. 3 spindle of a Model LVF Brookfield Viscometer and rotating this "paddle" in the foam produced after vigorously shaking the detergent solution in a jar at room temperature. In a typical set of runs, the following dial readings were observed at six r.p.m.:

Detergent	Dial reading after 5 min.
A. 0.05% Sod. lauryl sulfate	92
B. 0.05% Sod. alkyl aryl sulfonate	60
C. 0.025% Sod. alkaryl sulfonate + 0.025% Ninol AA62	58

It was also readily observed visually that the lauryl sulfate foams on aging were much stiffer, or crisper, than the others. There is, therefore, again no evidence that the dialkylolamide increases bubble toughness significantly.

Apparently the tough films formed by lauryl sulfate solutions under static conditions are not directly associated with foam stability in dishwashing, since solution C gives a higher residual foam in the dishpan test than solution A. Consistency tests were also run on the foam in the dishpan. Here all three detergents gave values close to 40 scale units, being lower than the readings in the jar because of less vigorous mechanical action. Furthermore, the constant splashing action during dishwashing kept the foams wet at all times so that the lauryl sulfate could not attain significantly higher consistency than the others.

Abandoning the mechanical strength theory, attention was turned to the possibility that surface tension considerations might shed some light on the problem. According to Robinson and Woods (4), a necessary condition for an oil to act as a defoaming agent is that it should spread on the surface of the foam bubble; in other words, the spreading coefficient (S.C.) of the oil over the detergent solution should be positive. The coefficient can be calculated from the usual equation: $S.C. = S_D - S_O - S_{DO}$ where the symbols refer to the surface tensions of the detergent solution, the oil and the oil-solution interface, respectively. These values were here determined for both Nujol and oleic acid against tap water solutions of alkyl aryl sulfonate and sulfonate-dialkylolamide blends, as follows:

	dynes/cm
A. 0.025% Alkyl aryl sulfonate	31.0
B. 0.0125% Sulfonate + 0.0125% Ninol AA62	29.6
C. Oleic acid	35.5
D. Nujol	33.9
E. A/Oleic acid	5.6
F. B/Oleic acid	7.2
G. A/Nujol	1.9
H. B/Nujol	0.7

From these values, the spreading coefficients were calculated to be:

Oleic acid on alkaryl sulfonate solution	—10.1
Oleic acid on sulfonate-amide solution	—13.1
Nujol on alkaryl sulfonate solution	— 4.8
Nujol on sulfonate-amides solution	— 5.0

None of these values is positive, as demanded by the theory. Furthermore, Nujol has a greater spreading tendency than oleic acid (less negative) which is contrary to expectations in view of the greater defoaming action of oleic acid. Surface tension considerations, therefore, fail to throw any light on the mechanism of foam stabilization by alkylolamides.

Another factor involved might be emulsification of the soils present. Solutions of the alkyl aryl sulfonate alone and in blends with the dialkylolamide were, therefore, shaken up with small amounts of soybean oil, oleic acid or Nujol. It was found that emulsification was very poor in all cases, with the sulfonates alone giving very slightly better dispersion of the oils than the sulfonate-amide blends. Lauryl sulfate solutions gave the best dispersion of the oil droplets. In none of these cases could the detergent at 0.025 percent concentration really be said to emulsify these oils, however, since the droplets were quite large and rose to the surface rapidly after agitation stopped. Actually a high degree of emulsification is not necessary for good dishwashing performance.

The factor of bubble size was also studied briefly, since it was thought possible that the alkylolamides might help create foams with smaller bubbles that might be more stable because of geometrical factors. Accordingly, 0.025 percent solutions of alkaryl sulfonate and sulfonate-amide blends were shaken up with and without soils present, and bubble size carefully compared. No significant differences could be observed, however.

Summarizing, it would seem that the foam stabilizing action of the alkylolamides cannot be explained by mechanical strengthening of the bubbles, resistance to the spreading of oils, improved emulsification or reduced bubble size.

It is believed by the writers that a possible explanation may lie in the type of adsorbed layer at the film surface. As Freundlich points out (5), a foam breaker probably functions by displacing the adsorbed layer of detergent molecules from the surface and substituting its own non-film forming molecules. It might be that the alkylolamide molecules are not so readily displaced as the sulfonates, being more strongly adsorbed at the surface, as suggested by some recent work of Bury and Browning (6).

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4. J. V. Robinson, W. W. Woods, Nat. Advisory Comm. Aeronautics Tech. Note No. 1025 (1946).
5. H. Freundlich, "Colloid and Capillary Chemistry" p. 792.
6. C. R. Bury, J. Browning, Trans. Faraday Soc. *49* 209-11 (1953).

New Grease Resistant Mat

A new grease and chemical proof rubber mat was announced recently by Wear Proof Mat Co., Chicago. The mat is made of "Niru", a synthetic rubber that is said to resist deterioration from contact with chemicals. A safety feature is its rubber-cross ribs, designed to prevent slipping on floors where grease and oil are present.

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PRODUCTION Clinic

By E. G. Thomssen, Ph.D.

RECENTLY I had the opportunity of observing two firms confronted with crucial situations which placed employees in a position where their testimony weighed heavily for or against the employer.

The first of these incidents involved a court matter which was of great concern to a company whose president was a pompous, distant individual who neither knew nor recognized any of his factory operatives. On the rare occasions when he went through the plant he assumed a dour, annoyed look. His employees were not pleased at his visits, and actually were happy when they were over.

The second company's president assumed a very different attitude towards his labor force. Every morning he made notes of subjects on which he intended to confer during his daily visits to the plant, including not only company matters but also personal questions to discuss with various workmen. He spent about one hour each morning in the plant before his own office opened. During these visits, he told me, he got a big kick out of "chewing the rag" as he put it with the factory and laboratory men. Through this "rag chewing," he said, he knew just what problems the manufacturing department was up against. It afforded him many opportunities to aid in their solution. The whole working force was pepped up by his recognition and encouragement. Most of the men and women he called by their first names. He was proud of the fact that although union organizers had tried to unionize his plant and had held two elections, his employees turned down the unions overwhelmingly. They were satisfied that the company, and particularly its head, was offering them more advantages and benefits than competing union plants were enjoying.

Considering these appraisals of the two men, it was a foregone conclusion which course employees would follow when their aid was required.

When the court case came up for the first company many former employees were summoned by the opposition. Almost to a man they went out of their way to hurt the company's case. Even the company's witnesses, who must have realized that their jobs might be adversely affected, gave lukewarm testimony that had to be forced from them by the attorneys. The verdict went overwhelmingly against the company.

DR. THOMSSEN

The second company's case had to do with a hearing before a referee and city officials. Changes in the city ordinances were contemplated that would adversely affect the firm's operations. When the company called for witnesses, practically every employee was willing to testify. Those who were called on the stand defended the company's methods of operation so forcibly that the company won a unanimously favorable decision.

These are but two isolated cases in which the attitude of the top men toward those working under them hurt or benefited the company. The counterparts of both types of men may be found in hundreds of other cases. The distant, unfriendly type of executive officer is fortunately becoming outmoded. Industry's stockholders realize that friendliness is a necessary attribute of the successful head of a business. The time has passed when overlords represented competent leaders of industry.

Laboratory Centrifuge

CENTRICO, Inc., Englewood, N. J., recently sent us its bulletin illustrating and describing its universal laboratory centrifuge. Equipped with four interchangeable bowls in the one unit, the centrifuge may be used for clarification, separation, mixing, homogenizing, emulsifying and concentration of all types of liquids. It is particularly valuable in the laboratory for testing small amounts of products to interpret the results to larger size machines.

The company also handles oil purifiers for clarification, dehydration and refining of various chemical liquids including vegetable oils.

Mobile Air Conveyor

WHERE hoppers are to be filled on filling or other types of machines in various locations mobile air conveyors offer a solution. Different types of powdered materials may be handled in sequence with practically no contamination. All parts that contact the material may be made of stainless steel, and suction hose that picks up neither taste nor odor is available. The conveying rate is dependent upon the type of powder to be handled and the height to which it is raised. Free flowing materials such as sugar are handled at the rate of 150 pounds a minute to a height of nine feet; compact powders such as flour can be handled at 100 pounds per minute. The machine is so mounted that one man may easily transport it from place to place. Airborne Conveyors Corp., New York, makes the equipment.

Sodium Perborate

WE older men remember the popularity of sodium perborate as a laundry bleach. Before World War I a German preparation, "Persil," had large distribution throughout the world. Sodium perborate has been rediscovered in recent times and its use for various bleaching purposes is growing, especially in home laundering and in launderettes where high tempera-

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tures of wash water are available. Some of the advantages of sodium perborate as against chlorine bleaches are that neither color nor fabric are adversely affected by its use under normal washing conditions; it bleaches all washable fabrics either natural or synthetic; it is low in cost; it is odorless; it does not deteriorate during shelf life and it may be readily packaged with little danger of spillage or of further damage when spilled. The Electrochemicals Division of E. I. du Pont de Nemours & Co., Wilmington, Del., has information available regarding the use of sodium perborate.

Laminated Textile Bags

BEMIS Bag Co., St. Louis, now features a laminated textile waterproof bag for use with hard-to-pack items. It may be had in three or five layer construction depending upon how much product protection is required. These bags give protection against variations of moisture content, sifting, escape of odor and resist snagging, tearing and rough handling.

Offers Na Epoxystearate

Availability in experimental quantities of the sodium salt of epoxystearic acid was announced recently by W. C. Hardesty Co., New York. Among suggested uses of this compound are detergent and softening compositions because of its surface active properties. The chief use of the sodium salt, owing to its greater stability, will be a source of epoxystearic acid in the making of derivatives of 9, 10 dihydroxy stearic acid. Data on the physical and chemical properties of sodium epoxystearate are available on request.

New Humidity Indicators

The latest variety of humidity indicating cards, marketed under the trade name, "Humigraph", have recently been announced by Andrew Technical Service, Chicago. The basic card contains seven indicator spots, the color of which changes from blue to lavender to pink under atmospheric humidity changes. The card is scaled to show relative humidity by reference to the color change spots. The cards are extensively used by producers of materials affected by humidity.

New Filter Bulletins

Latest Ertel filters, laboratory filters, pyrogen filters, asbestos filter sheets, vacuum bottle fillers, stainless steel pumps and mixers are described in two new bulletins recently issued by Ertel Engineering Corp., Kingston, N. Y. Fully illustrated and described are the EU Model filter, an all-purpose filter meeting most filtering requirement from coarse pre-filtration to ultra fine filtration; the EW Model filter, for smaller production; and the ECD Model filter, where costly volatile or dangerous solutions are handled. Copies of these two bulletins are available on request to Ertel at Kingston.

Odor Analysis Brochure

The scientific analysis of odor by the panel method is described in a brochure recently issued by Evans Research and Development Corp., New York. Covering many of the odor problems of detergents, it shows how sensory testing can improve a product, and help to establish advertising claims. It explains how the organoleptic panel functions, tells how its results are evaluated, and lists the advantages which can be obtained by its use. It also presents several case histories in which clients have benefited from the organoleptic method. For a copy of the brochure, write to Evans Research and Development Co., 250 East 43rd Street, New York.

German Trade Names

The April issue of *Chemische Industrie* is a special number devoted to trade names and trade marks, and describes their role in all parts of the chemical and allied industries, in a series of separate articles.

German branded soaps and detergents survived suspension in favor of pool products during World War II, and triumphantly returned to their old prominent positions after restrictions in that market were removed.

In the field of pesticides and plant protection products about 1000 trade named or trade marked items are officially recognized in the Federal Republic. A trend towards development of such trade names into generic names exists there as it does in this country. In the interest of the consumer it is recommended to simplify the nomenclature and reduce the number of trade names.

History and significance of brands in the shoe polish and floor polish industries, and in the field of wood preservation are outlined in separate articles.

The 376-page issue includes a classified list of trade names and their owners, and an alphabetical list of trade marks.

Preservative Bulletin

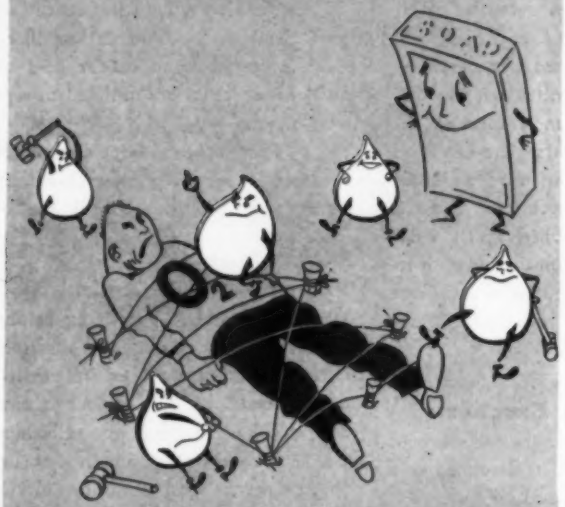
"Santobrite", a water soluble preservative for water-base adhesives, is the subject of a revised bulletin recently issued by the organic chemicals division of Monsanto Chemical Co., St. Louis. The bulletin describes the properties and function of the chemical, which is sodium pentachlorophenate, in the prevention of microbial decomposition of animal or vegetable adhesive compounds. It also includes a table of typical use—concentrations with common organic adhesive materials as well as instructions for applying and handling. "Santobrite" is available in powder, briquette and pellet forms.

New Cleaner-Sanitizer

"Thor-O," a new, fast-acting cleaner, is now being supplied nationally through local distributors, it was announced recently by "J" Chemical Works, New York. The firm claims that plastics, china and all types of tableware can be sanitized and cleaned by "Thor-O" with important savings in time and labor. Tableware is soaked in a solution of the product, rinsed, and is ready for use. "Thor-O" is said to be odorless, leaves no aftertaste, is dustless, and contains no abrasives or chlorine.

One to two tablespoonfuls of "Thor-O" per gallon of very hot water is recommended by the manufacturer. Objects too large for immersion are rubbed with a cloth which has been sprinkled with "Thor-O". The product is said to remove stains from colorfast fabrics, and is also used in washing machines to increase the efficiency of soap.

how to inhibit oxidation....



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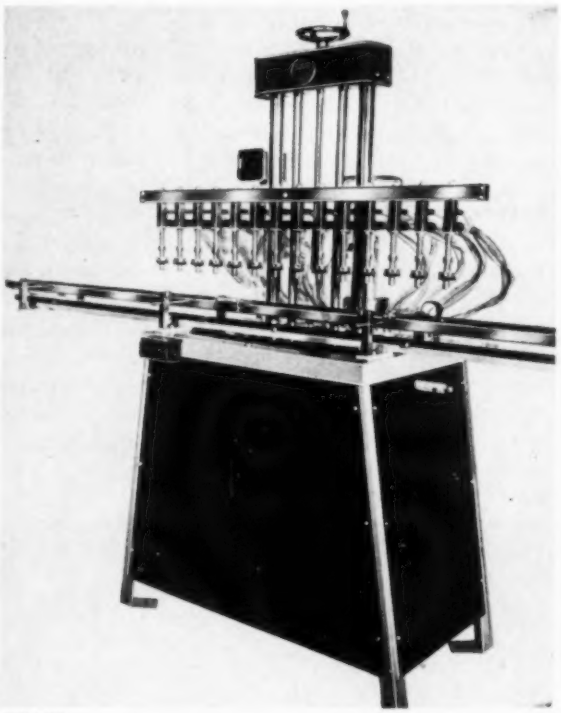

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Products and PROCESSES

Soap Based Cleaner

A mixture said to be particularly suited for cleaning wood, glass, or polished metal surfaces, consists of fine fibered hardwood (i.e. beech wood) mixed with soap, disinfectants, and perfumes. Swiss patent 274,526, 1951, through *Chem. Abstracts*, vol. 47, No. 3, page 1414.

Drying of Soap Stock

Soap stock is mixed with powdered or sized metal such as nickel or iron, which has great electric resistance. The mixture is subjected to high frequency electric current to dry the soap stock by the heat produced inside the soap. Japanese patent 4377, 1951, through *Chem. Abstracts*, vol. 47, No. 5, page 2519.

Improved Liquid Shampoo

An improved liquid hair shampoo, claimed to be stable and effective at temperatures around 40°C, essentially contains a synthetic detergent consisting of one or more water-soluble salts of sulphated long-chain alkyl alcohols, such as lauryl alcohol sulphate paste and/or ammonium lauryl sulphate, a minor proportion of vegetable oil, preferably almond oil, and of wax, preferably bees wax, together with water. The stability of the shampoo can be increased by incorporating a small proportion of a polymethyl methacrylate emulsion, which also facilitates the removal of the shampoo constituents from the hair during rinsing. British patent 688465, 1953, Ashe Laboratories, Ltd. Leatherhead, Surrey.

New Insect Repellent

Improved insect repellent compositions contain an alkane diol which has adjacent hydroxy groups and from seven to 12 carbon atoms in the molecule and a known non-solvent insect repellent or insecticide. Such compositions are said to be non-irritant and non-poisonous to higher animals, non-staining, and of slight but pleasant odor. They are claimed to offer improved and long-lasting protection against insect attack. British patent 687850, 1953, Shell Refining & Marketing Co., Ltd., London.

Antibiotics as Pesticides

Fungistatic, fungicidal, insecticidal, and miticidal properties of certain antibiotics are reviewed in an article by Josef Klosa in *Seifen-Oele-Fette-Wachse*, March 18, 1953, page 143. Antimycin A, for instance, is active against flies, clothes moths, and aphids. Against the larvae of the carpet beetle antimycin is one hundred times more active than aluminum silicofluoride, currently used in woolen mills. Its action against this pest appears to be based on repellency. In addition, antimycin exhibits very high toxicity against rats. The author foresees such antibiotics in use as pesticides and in the cosmetics industry. They have almost no odor, which holds out hope for the manufacture of effective but odorless moth controlling agents.

French Soap Patent

A soap is made by saponifying a mixture of pyromucic acid, 2-furfuryl alcohol, and a fatty acid with an alkali metal base. The preferred ratio of pyromucic acid to the alcohol is 56:49. French patent 975,636, *through Chem. Abstracts*, vol. 47, No. 4, p. 1956.

New Transparent Soap Use

Insertion of publicity matter into transparent cakes of soap is the subject of British patent 687527, 1953, to A. Anziere, Marseille, France. The method calls for a cutter blade for partially dividing a cake of soap, for the introduction therein of a display member. The blade consists of a single thin rectangular plate serving to form an opening in the cake of such a size as to receive the display material therein, the plate having front and lateral sharp cutting edges to assist penetration into the cake of soap and a single rectangular forward extension, integral with the plate and located centrally on the plate's forward edge, to serve as a stop, limiting penetration of the blade into the cake of soap. The extension's front edge is sharpened so as to penetrate completely through the cake and form an air outlet, through which the air is expelled when the display material is inserted. This prevents the trapping of air bubbles and formation of other faults which might spoil transparency of the soap.

Tagged Lauric, Stearic Acid

New Carbon-14 labeled compounds for use in soap and oil research were introduced recently by Tracerlab, Boston. Lauric acid-1-C-14 and stearic acid-1-C-14 are each priced at $250.00 per millicurie, f.o.b. Boston. Specific activity is 1.0 millicurie per millimole, and the minimum order is 1.0 millicurie.

Better Filled Soap Bars

A new process to form filled soap bars or cakes comprises rapidly chilling molten filled soap by adding sodium aluminum silicate gel and plodding the resultant solidified soap. This is said to result in bars or cakes of good appearance, which are not overloaded with solid material and relatively free from efflorescence. British patent 688466, 1953, Lever Brothers & Unilever, Ltd., London.

Surfactants in Fertilizer

A new study of the use of surfactants in the manufacture of fertilizer by acidulation has recently been released by Universal Detergents, Inc., Long Beach, Calif. Copies may be obtained by requesting technical bulletin 54, "Udet F in Acidulation," from Universal Detergents Inc, 1825 East Spring St., Long Beach 6, Calif.

New Stieh Hand Cream

A new protective hand cream, marketed under the trade name, "HgX", was announced recently by William M. Stieh & Co., New York. The new hand cream was first developed to meet government specifications. Later, the HgX mercury decontaminating formula was added. It is made especially for those persons contacting mercury and mercurials.

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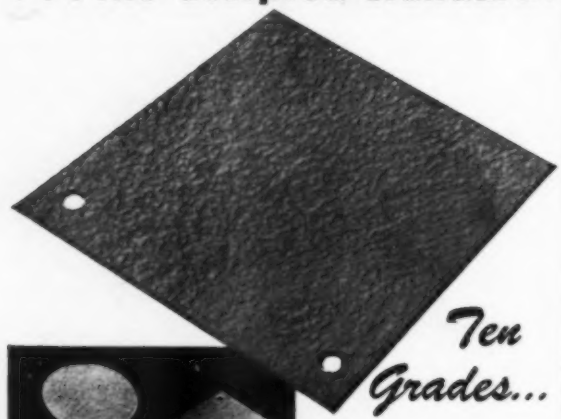

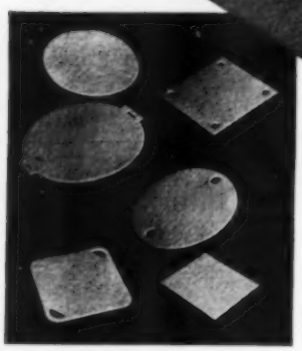

Ten Grades...

1, 2, 3 } Liquid Soaps, Drugs, Viscous Liquids, etc.

4, 5, 6 } Pharmaceuticals, Elixirs Oils, Sweet Wines, Antiseptics

7, 8, 9 } Chemicals, Food Liquids, Whiskey, Wines, Cider, Water, Germproof

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NEW Patents

The information below is furnished by patent law offices of

LANCASTER, ALLWINE & ROMMEL

402 Bowen Building
Washington 5, D. C.

The data listed below is only a brief review of recently issued pertinent patents obtained by various U. S. Patent Office registered attorneys for manufacturers and/or inventors. Complete copies may be obtained direct from Lancaster, Allwine & Rommel by sending 50c for each copy desired. $1.00 for Canada. They will be pleased to give you free preliminary patent advice.

No. 2,635,103. Detergent and Method of Making the Same, patented by Henry A. Molteni, Dover, and Nathaniel H. Masarky, Teaneck, N. J., and George Barsky, New York, N. Y., assignors to E. F. Drew & Co., Inc., New York, N. Y., a corporation of Delaware. A method of making detergents is covered, which comprises mixing 1 mol. of a water-soluble hydroxyethylsulphuric acid salt with an amount of a higher fatty acid less than 1 and more than 0.6 mol., maintaining an inert atmosphere, heating said mixture to a temperature of 200°-300° C. for a sufficient length of time to cause a substantial reaction to occur between said substances, the pressure being below atmospheric but above 250 mm., thereafter decreasing the pressure to below 100 mm., continuing the heating to remove free fatty acid.

The reaction product is described of 1 mol. of a water-soluble hydroxyethylsulphuric acid salt with about .6 to 0.95 mol. of a higher fatty acid, produced by heating said reactants at 200°-300° C. at pressures below atmospheric and above 250 mm. in an inert atmosphere, and thereafter continuing said heating at pressures below 100 mm.

No. 2,635,747. Inspection Apparatus, patented by Harley Roland Hughes, Louisville, Ky., assignor to Colgate-Palmolive-Peet Company, Jersey City, N. J., a corporation of Delaware. An apparatus is covered for checking the filling of containers, comprising a conveyor for moving open-topper containers each having an upstanding closure flap at its leading end in succession through an inspection station, a photoelectric inspection device at said station comprising means for projecting a beam of light downwardly onto the surface of the substance within the container at the inspection station and light sensitive means for receiving light reflected from said surface within a predetermined angular zone, means operated by said device for ejecting improperly filled containers from said conveyor, means on one side of the conveyor for protecting a light pass substantially equal to but slightly less than the width of the container taken in the direction of movement of the conveyor and further light sensitive means in the path of said light pass, said light pass extending a predetermined horizontal distance above the conveyor so that while passing through said station each container will block said light pass for a predetermined period when said container is positioned wholly within said station with its leading closure flap of said inspection light, and means connecting said further light sensitive means by said first light sensitive means only when said container wholly blocks said light pass.

No. 2,636,840. Insecticidal Compositions Comprising Benzyl or Tetrahydrofurfuryl Ester of Mucochloric Acid, patented by Horace D. Brown, Plainfield, N. J., assignor to Merck & Co., Inc., Rahway, N. J., a corporation of New Jersey. An insecticidal composition is described containing as an active ingredient a mucochloric acid ester selected from the group consisting of benzyl and tetrahydrofurfuryl esters, and a carrier therefor.

No. 2,629,681. Insecticidal Composition Comprising a Thermal Decomposition Product of Pentachlorpentadienoic Acid, patented by Hubert M. Hill, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey. The patent covers a composition effective for the killing of insects which comprises a mixture of .05-10% of the product resulting from thermally decomposing pentachloropentadienoic acid having a melting point of approximately 125° C. by subjecting the same to a temperature within the range of 150-300° C. until evolution of HCl ceases, and 90-99.5% of a carrier therefor.

No. 2,636,007. Detergent Package and Method of Making Same, patented by Delbert F. Jurgensen, Jr., Tuckahoe, and John A. Abbott, Jr., Brooklyn, N. Y., assignors to American Machine & Foundry Company, a corporation of New Jersey. A detergent package is described which is suitable for a single washing operation and comprises a tubular wrapper which has open ends and is readily disintegratable in water during washing, a quantity of detergent particles filling said wrapper , and a fused binder mixed with said detergent particles and retaining them in a firm coherent mass the proportion of binder to soap being such that sprinkling of the detergent particles from the open ends of the wrapper will be prevented and the wrapper and said coherent mass of detergent binder particles will be readily disintegrated in water to release the detergent particles during washing.

The process is covered of manufacturing detergent packages suitable for a single washing operation comprising forming a package comprising a tubular wrapper which has open ends, and a mixture of detergent particles and a sufficient fusible binder to form a coherent friable mass with said detergent particles when fused enclosed within said wrapper, heating said package adjacent the ends thereof only to fuse the binder therein at the package ends whereby upon cooling of the packages the detergent particles will be sealed at the package ends.

No. 2,621,143. Thiosulfenyl Dithiocarbamates as Grain Insect Repellents, patented by Lyle D. Goodhue and Carolyn E. Tissol, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware. A method for repelling insects which frequent grain and grain products is patented which comprises applying a repelling amount of a thiosulfenyl dithiocarbamate to the locus from which said insects are to be repelled.

No. 2,627,487. Insect Repellents, patented by Nathan L. Drake, College Heights, Md., Wilbur J. Shenk, Cleveland, Ohio, and Charles M. Eaker, Affton, Mo., assignors to the United States of America as represented by the Secretary of the Army. An insect repellent composition is described comprising a member of the group consisting of the propyl ester of N,N-diethyl succinamic acid and the propyl ester of N,N-pentamethylene-succinamic acid, and a non-toxic insect-repellent-adjuvant as a carrier therefor.

No. 2,634,238. Calcium Hypochlorite Detergent Composition, patented by Edward C. Soule, Niagara Falls, N. Y., assignor to Mathieson Chemical Corporation, a corporation of Virginia. A dry, stable detergent composition is described consisting essentially of about 0.5 to 8 parts by weight of calcium hypochlorite containing upwards of about 50 per cent available chlorine, about 3 to 20 parts by weight of finely divided substantially anhydrous potassium carbonate, about 5 to 20 parts by weight of a sodium polyphosphate, and about 5 to 20 parts by weight of a synthetic water soluble organic detergent selected from the group consisting of sulfates, sulfonates and quaternary ammonium salts which do not produce an insoluble precipitate in the presence of calcium ions.

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SOAP PLANT Observer

By John W. McCutcheon

MOST soap manufacturers today are extremely research conscious. This has been brought about chiefly by the success of synthetic detergents which have shown how rapidly a few new ideas can change the face of an industry. Companies whose business a few years ago was principally soap manufacture have added synthetic detergents to their lines of products.

The expansion and importance of these relatively new products has caused practically every large organic chemical company to study them with new interest and to direct increased research into this field. The result has been to make available to small soapers a wealth of semi-processed raw materials, thus putting them in a better position to compete with the larger organizations. These latter in turn have found it expedient to move on into newer fields opened up by their own research efforts.

Several years ago the writer had occasion to examine the tallow situation. At that time it appeared that the only ones who were doing any worthwhile research on tallow were the prime producers. Continued low prices have made this product an attractive raw material for research efforts and there appear indications that the soapers themselves will be the ones to take up the slack caused by excess tallow output in the face of declining consumption, whether or not the end product has any relation to cleaning. After all, lunch counters in drug stores were not a logical expansion of the pharmaceutical trade!

IS there any merit to farming out research projects to foreign laboratories? This question was asked of the writer the other day by the representative of a large European organization. The bait held out for such a project was the decreased cost because of lower wage scales, due to the favorable 4 to 1 ratio of the dollar to the foreign currency.

The idea seems intriguing and practical under certain conditions. In the first place, the only type of project favorable under such conditions is one of fundamental research. The type of research which borders on product development would be extremely difficult to carry out except by persons perfectly familiar with the American scene. Secondly, the integrity of the organization carrying out the research would have to be beyond question. Granted, that these two conditions were met there still must be considered the cost of liaison between the two parties to the arrangement, which would partially offset the savings on wages.

One real advantage, however, of such a cooperative research plan would lie in another direction—namely the new approach which a foreign organization would bring to bear on a project. This would be directly proportional to the genius of the man directing the work and not to the staff of routine workers carrying out his orders.

SOMETHING new has been added in recent years to the method of dry-cleaning. This is the use of synthetic detergent additives which are not removed periodically by filtration and distillation but are recirculated *ad infinitum* with occasional additions of new detergent to bring the strength up to standard. Such products are frequently called "charge soaps". The dirt is removed on a clarifying filter using such a material as kieselghur.

"Positively unhygienic", one manufacturer of dry cleaning detergents stated to the writer. The fact remains however, that the process is becoming increasingly widespread and large producers are forced to bring their particular trade name product on the market to meet the competition.

To learn how these operate, let us review briefly the role of a detergent in the dry cleaning industry. In the first place, we may classify solvent cleaners as the light gravity noncorrosive hydrocarbon types such as a Stoddard solvent and the high gravity non-inflammable synthetic types such as perchloroethylene. Both type solvents remove oil soluble dirt and stains and generally that is all the small cleaner around the corner uses to clean your suit for 85¢. The ice-cream stain down the front of the lapel still remains!

The next higher grade cleaner attempts to remove both water soluble and oil soluble stains at the same time by adding a controlled amount of water and a soluble detergent to the solvent. Often the operation will be in two parts—a preliminary solvent cleaning, followed by the addition of water and detergent with recirculation through a filter containing a clarifier and fuller's earth to remove the majority of detergent, water and dirt. The solvent is then distilled for further use. This is called the batch system.

Where the dry-cleaning establishment is large, classification of clothes becomes more practical. Gradations in the cleaning methods used go right down to the wet wash department that handles heavily soiled garments that cannot be cleaned in any other way. Water, of course, tends to shrink certain types of fibers and its addition to the solvent must be controlled very carefully or the suit will come back clean, but two sizes too small! Probably the ideal way to

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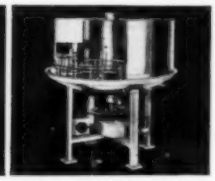

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clean would be to pre spot the water soluble stains with special cleaners, followed by a pure solvent wash containing sufficient emulsifier to take up the water present. In most cases this method is not practical due to the pressure of competitive pricing and large turnover. With the wide variety of fibers used today in clothing, the dry cleaner certainly has no easy task ahead of him, and it is easy to see why he is conservative in what processes he uses.

In the "charge system" the clothes are dried to a standard moisture content, then water and detergent are added to the solvent in definite amounts. The detergent is never removed from the system but is circulated through a clarifying filter which removes the dirt only. Some detergent is absorbed by the cloth, of course, and must be replaced from time to time. This is done by checking the detergent content of the solvent by the use of test kits and directions supplied by the manufacturer and is based on a chemical reaction between the detergent and an indicator. For example, if the detergent were anionic, a quaternary ammonium salt could be used, etc. The charge soaps so far noted in use appear to be chiefly mixtures of non-ionic and anionic synthetic detergents. Soap, of course, could not be used in such a system as the residual traces left on the cloth would be objectionable.

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Warning Labels Book

A new revised edition of its chemical labeling manual, "Warning Labels," has recently been issued by the Manufacturing Chemists' Assn., Washington, D. C. The manual was prepared by MCA to provide standards of labeling for chemical manufacturers. The booklet gives the essential precautionary information for persons using, handling, or storing chemicals. It also lists practical means of affixing warning labels to the containers.

The manual also provides a basis on which to achieve uniformity in state labeling requirements. The new edition sets forth the principles of proper warning label preparation and includes sample illustrative labels for some 250 industrial chemicals, including pesticides. It also covers labels for small packages and for samples and new products for investigational use.

Most of the suggested labels present information beyond that required by Federal statutes. They are intended for use in addition to or in combination with any label required by law. Copies of the 98-page booklet are available from the Manufacturing Chemists' Assn., 246 Woodward Building, Washington 5, D. C. Price, $1.00.

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New ADM Higher Alcohols

A group of new unsaturated higher alcohols that will find use in detergents will be made by Archer-Daniels-Midland Co., Minneapolis, at a new plant located at Ashtabula, O., it was announced recently. Construction of the plant begins this month and production of saturated and unsaturated alcohols is scheduled to begin twelve months later. Frank C. Haas, vice-president in charge of the chemical products division, will be in charge of the new operation.

High purity and other desirable properties are said to fit these alcohols for use in new types of detergents. According to ADM, the new alcohols will find use in shampoos, lubricating oil additives, corrosion inhibitors, anti-foam agents, cosmetics, anti-oxidants, synthetic waxes, etc.

Because the firm is a major processor of linseed, soybean, and marine oils, it is expected that these products will be the principal raw materials for the new alcohols. While coconut oil has long been a favorite raw material for the production of alcohols, its chemical composition is such that conversion into fatty alcohols results in only 10 percent recovery in alcohols above C_{18}. The soybean molecule would produce approximately 92 percent of these higher alcohols and linseed oil 95 percent. Beef tallow would yield approximately 65 percent and mutton tallow about 73 percent.

The linseed oil molecule contains more than 800 combinations of fatty acids and the composition of the soybean oil is almost as complex, according to Mr. Haas. Pilot samples of the new alcohols have been available for some time and are currently being evaluated and tested by several chemical processors. While alcohols will be the major products of the plant, glycerine and caustic soda will be important by-products.

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Tallow for Hot-Dip Tinning

Modified tallow and other animal fats are equal to palm oil as tinning oils for the "hot-dip" tinplating of steel sheets, according to results of research undertaken and published recently by the Armour Research Foundation of the Illinois Institute of Technology in collaboration with the Eastern Regional Research Laboratory of the Bureau of Agricultural and Industrial Chemistry, USDA. Development of satisfactory tinning oil from hydrogenated, deodorized, and stabilized tallow and grease provides a lower price tinning oil, creates a ready potential market for surplus fats, and reduces dependence on imports of palm oil during national emergencies. About fifteen million pounds of palm oil are currently being imported per year for tinning.

Details on the research leading to this new use for animal fats are described in publication AIC-354, Animal Fats in Hot-Dip Tinning, which may be obtained from the Bureau of Agricultural and Industrial Chemistry, Washington 25, D. C., or from the Eastern Regional Research Laboratory, Philadelphia 18, Pa.

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Quaternary Action and pH

Germicidal activity of four quaternary ammonium compounds against micrococcus caseolyticus, Escherichia coli, and Pseudomonas aeruginosa at various pH levels ranging from pH3 to 10 is the subject of a comparative study by K. F. Soike, D. D. Miller, and P. R. Elliker (Oregon State College). M. caseolyticus showed great resistance to the quaternaries' action at levels below pH6 to 7, but was rapidly destroyed in the alkali range. E. coli was resistant at levels below pH6, was highly susceptible at about pH6 to 7, and then exhibited a secondary peak of high resistance at about pH 8.0. P. aeru-

ginosa was most susceptible to quaternary action at low pH levels and showed greatest resistance at pH 7 and above. Variations in resistance of the different organisms, in general were similar for the four quaternaries tested. This fact suggests that the marked variation in rate of destruction with alteration of pH is due to factors associated with the cell, rather than to the specific effect of pH on activity of the quaternary ammonium compound molecules as such. *J. Dairy Science* 35, 764-71(1952) through *Chem. Abstracts*, vol. 47, No. 1, page 272.

Mellocraft Plant

(From Page 51)

fices, show rooms and warehousing operations are carried out in the basement, first and second floors. Most of the manufacturing takes place on the third floor and storage of packages and raw materials is located on the fourth floor and in the basement.

The building is located strategically just on the outskirts of Toledo's expanding Civic Center and business district. Ample parking space is available for customers, employees and visitors to the plant. Efficient handling of bulky items is facilitated by a new 100 foot loading dock, which is located in the rear of the building and adjacent to the two elevators. This provides space for ten trucks as well as a ramp to unload carload shipments from a siding on the Toledo Terminal Railroad, practically directly into the building. An Adjust-a-Dock has been installed to compensate for various truck body heights which may vary with size of tires and the weight of the truck. This floating adjustable dock and the concrete floors in the building permit the palletizing of loads and improved material handling methods. At end of railroad track is a chute which unloads carload shipments of light materials directly into basement of building by gravity. Inside the building steel racks and adjustable steel shelving result in a neat arrangement of packaged goods and raw materials. Elevators have been modernized and push button controls have been installed to economize on labor.

The steam plant has been enlarged so as to fit into the processing operations. To carry this out a new fully automatic oil fired Johnston package boiler has been added, mainly for chemical processing operations.

Mellocraft manufactures a line of basic sanitary chemicals which includes cleaning compounds, disinfectants and insecticides. It jobs a big line of related items and equipment to round out a complete line of sanitation necessities demanded by the commercial, institutional and industrial fields. The company also fills the local demand for heavy industrial chemicals and laundry supplies by keeping a stock of these on hand to make prompt shipments in Toledo, which does not warrant branch offices by prime producers of such items.

The new manufacturing setup necessitated the installation of additional dry mixers, powder fillers and labelers, as well as a complete rearrangement of the liquid mixing and filling operations. This equipment is now so arranged as to process and fill a number of items efficiently with the least expenditure of time and labor. Like most manufacturers of sanitary chemicals, a rather large number of products are made. None of these are produced singly in large enough volume to warrant full automatic equipment. Adaptability and versatility so as to handle several items on one machine as well as facility to change over quickly from one product to another with a minimum of time spent on cleaning up procedure were the goals in setting up the machinery and equipment. The flow of raw materials in and out of the processing rooms and the use of gravity whenever possible has been utilized. The possibility of contamination of one product with another has been eliminated. Manufacturing operations are carried out through several floors whenever this arrangement is economical.

A new laboratory for the analysis of raw materials and the control of the quality of finished products has been installed. This is adjacent to the processing operations so that the chemist in charge at all times is close to where his services are required.

Employer - employee relationships in the Mellocraft organization are most cordial. The owners of the company constantly strive to give the employees in all departments a square deal and to keep a man or woman in the organization for life, if possible, once he is employed by it. An outline entitled "Mellocraft and You," telling of benefits to the company's employees as well as details of the policies and procedures of the company is presented to everyone in their employ. This is a clear, concise, complete explanation of their relationships. Any employee reading it knows exactly what his duties as a staff member are, what vacations and holidays to expect and the company's policies as to pay increases, sick leave and overtime pay. Among the benefits the company extends to its employees are a medical examination, a profit sharing bonus as "partners" in the business, accident and hospital expenses and funeral emergency expenses. The psychology of the executives in the company is to encourage the workmen's confidence in Mellocraft.

This new plant and the happy relationships of the company toward its clientele and staff bespeaks even greater success in their field than its progress during the past decade has enjoyed.

Fels Names Miss Lloyd

Appointment of Rhona Lloyd as director of public relations was announced recently by Fels & Co., Philadelphia.

Fodor Heads NPA Branch

Appointment of Paul A. Fodor, Jr. as chief of the inorganic and agricultural chemical branch of the National Production Authority was announced recently by Columbia-Southern Chemical Corp., Pittsburgh. Mr. Fodor, on temporary leave from Columbia-Southern, is the district manager at Philadelphia for Columbia. A graduate of Ohio State University, Mr. Fodor has been associated with Columbia during the past 13 years. The affairs of the Philadelphia district sales office are being administered by C. T. Robertson, as acting manager.

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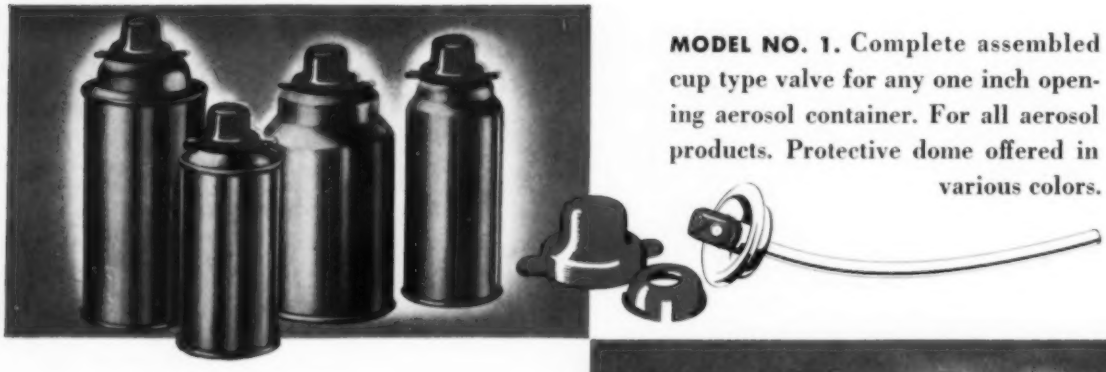

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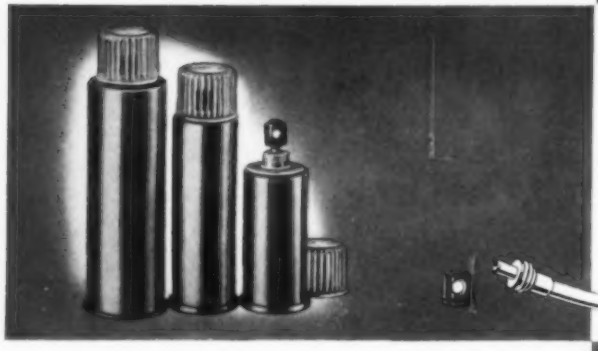

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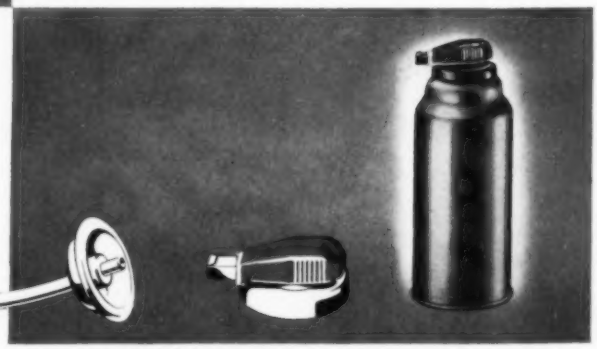

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M.G.K. Super-Synergist 264** has been thoroughly tested for over two years and has been used in the making of many thousands of gallons of cattle sprays and more than 25 million aerosol bombs.

This remarkable product is very efficient in increasing the already potent knock-down and killing power of M.G.K. pyrethrum and allethrin.

Many cattle spray manufacturers are not only making substantial savings (up to 30%) in their material costs but they are, in many cases, producing a much more efficient spray.

***M.G.K. Super-Synergist 264 has been approved for use by the United States Military Forces.*

Cut your cattle spray costs as much as 30%

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**Professor W. N. Bruce, associate entomologist of the Illinois State Natural History Survey at Urbana and nationally known for his research on cattle insecticidal sprays, reported on this, and other synergists, at the annual conference of the North Central Branch of the Entomological Society of America. This report is now in press in the proceedings of the branch.*

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While M.G.K. Super-Synergist 264 may be purchased as a single ingredient, we also furnish many manufacturers complete and partial formulas, made to their or our specifications, thus simplifying their buying problems and processing costs. Manufacturers of cattle sprays are urged to write for full details about the possible savings.

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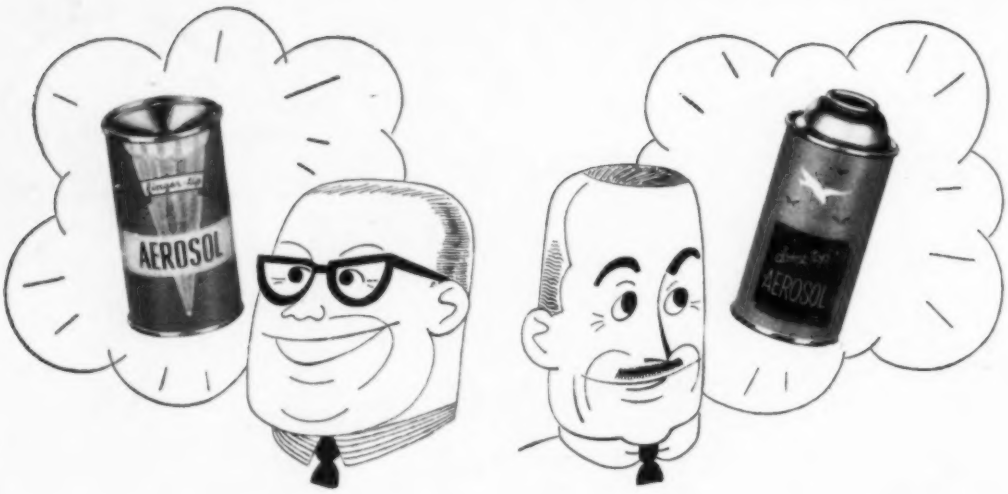

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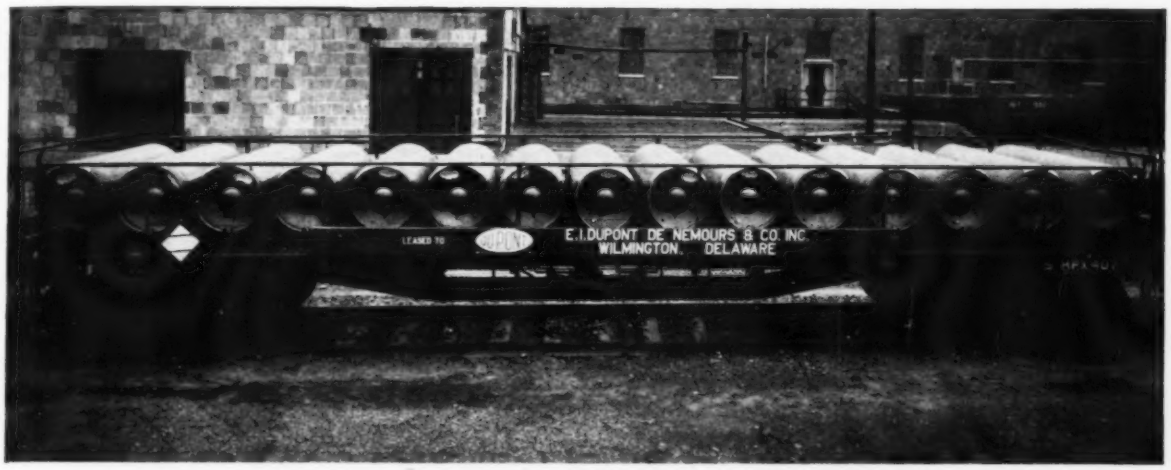

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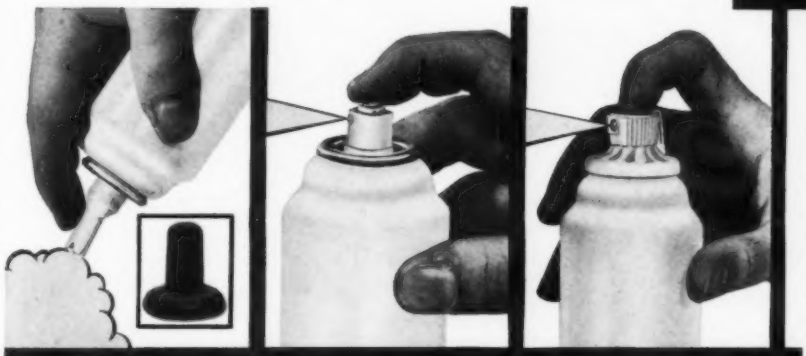

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for foam products: shaving cream, whipped cream, etc. Tilt the top to operate.

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for spray *or* foam. Unit construction. Easiest to use. No parts to lose. A twist opens or closes it. No after drip or puff.

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Pres-O — and only Pres-O — offers a *complete* line, a line which includes *individualized styling for your product,* a line which *covers every need for pressure package dispensing.*

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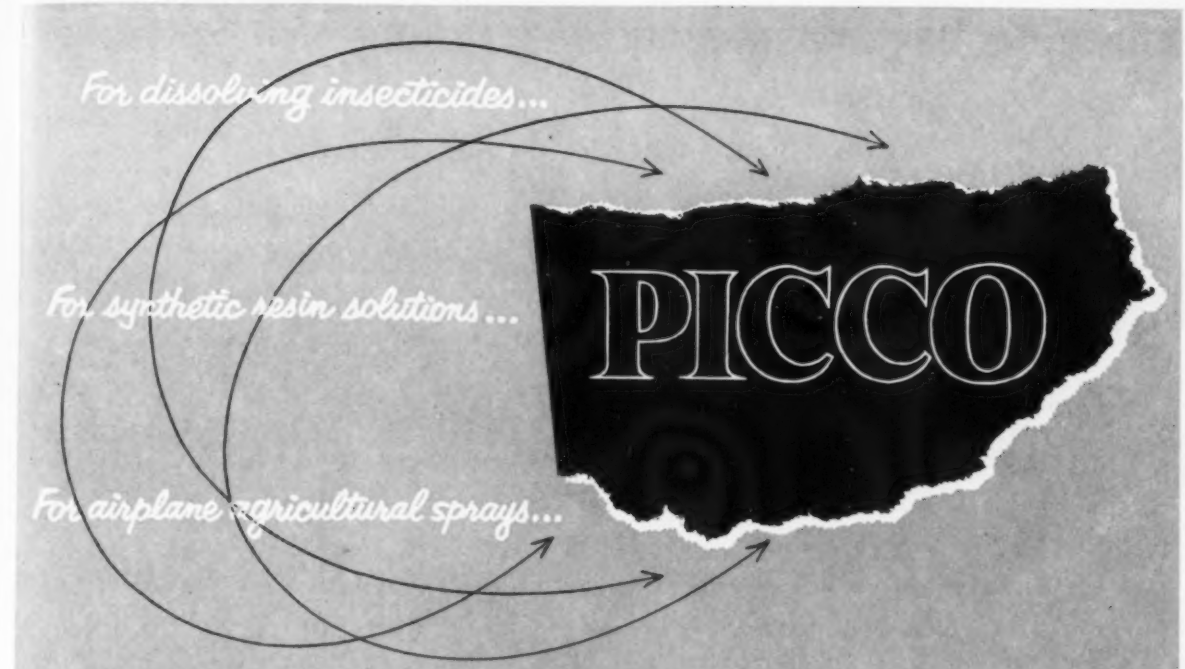

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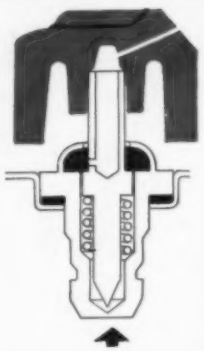

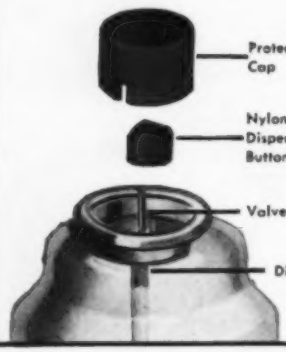

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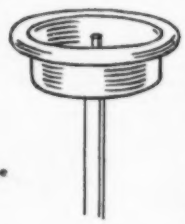

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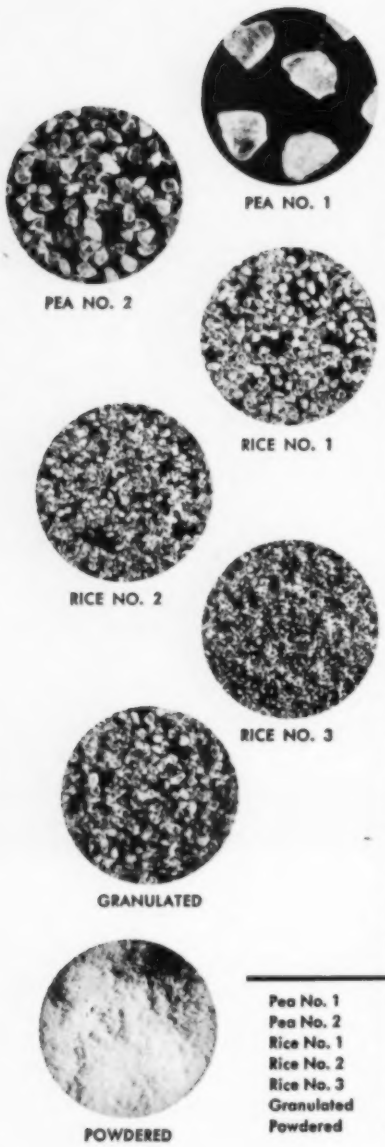

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Pea No. 1	0.337" to 0.52"
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Rice No. 2	0.065" to 0.088"
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SOAP & SANITARY CHEMICALS

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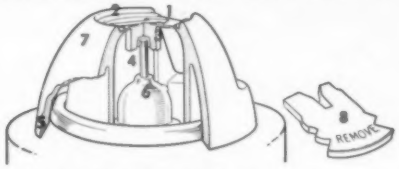

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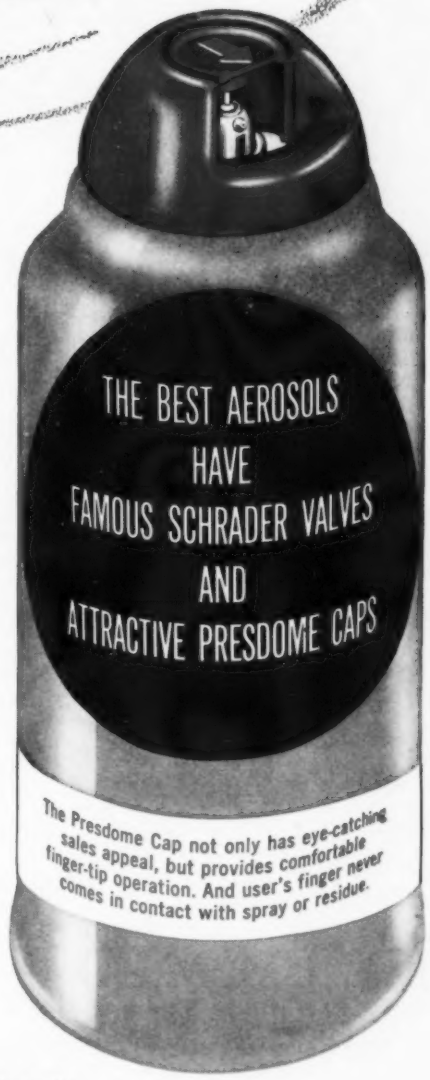
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STOCK SPRAYS

By A. G. Grady
Sinclair Refining Co.

U. S. Industrial Chemicals, Inc., photo.

ANY discussion of stock sprays will still bring forth long and, at times, interesting arguments over the comparative merits of certain toxicants and combinations of toxicants; light oils versus carriers of higher viscosity; or the efficiency, cost and end results of petroleum sprays as against emulsions and other water-based insecticides. These differences are but a part of the controversy because it can move on to the proper application of stock sprays and the merits of different dispersal units. The specter of repellency claims may also enter the picture, as may the differences of opinion involved in crediting the increase or reduction of milk flow or the thriftiness of the herd to a stock spray or sprays. Interesting and informing as these discussions may be, they cannot be compared with the heated debates of 10, 15, or even 20 years ago on the merits of certain stock spray components.

Much progress has been made since the first stock spray appeared on the market, but the search for the ideal insecticide still continues. The value of other controls is also being emphasized as aids in attaining the goal of better fly control. Some of these controls are as old as the fly problem on farms and adjacent areas. They are only of real value when a co-operative effort is made to: (1) stamp out breeding sources; (2) destroy larval food and the larvae feeding upon it; (3) eliminate the adults through the use of residual and contact sprays, baits, and traps.

If the perfect stock spray is yet to be compounded, what are some of the requirements necessary for its development? First, the finished product must be absolutely safe when sprayed on the animal according to the directions on the label. Some manufacturers suggest not more than one and one-half ounces per animal per day which allows for a wide margin of safety for stock sprays that have been subject to laboratory and field study before being marketed. In the application of conventional stock sprays, the importance of keeping within the one and one-half ounces per animal per day limit has become significant with the increased use recently of mechanical dispersal units particularly on dairy farms. Not too long ago most dairy farmers were obliged to apply insecticides on animals with a hand sprayer equipped with an adjustable nozzle. Sometimes they used an electric gun often designed for space spray use. The result was that rarely, if ever, the maximum insecticide dosage was applied to the animal, even if the stock spray were, by chance, broken up into the correct droplet size. Modern dispersal machines, with their ease of application, can be dangerous from the point of overdosage, unless the operator has a working knowledge of his particular unit's output in seconds.

Ten years or more ago stock sprays, even those having light mineral oil carriers, often gave poor results in reducing house and stable fly populations in dairy barns because of the difficulty in obtaining the full coverage necessary to kill these insects. The hand sprayers of that period required too much time and effort on the farmer's part to cover the area in question

and unless the barn were fairly tight, much of the insecticide was lost in the process. These shortcomings were also true of electric guns unless a light oil base spray were used, or the orifice of the sprayer were designed for oils of higher viscosity, obviously impractical and expensive. Time is of great importance to today's progressive dairy farmer and, where at all feasible, machines have taken the place of scarce and highly paid labor. It follows that anything that will cut down the farmer's time and effort, particularly physical labor in spraying, in the chore of readying the milking operations is of significance. The use of microsol units, knapsack sprayers, automatic spraying devices, even specially formulated aerosols, and other methods of applying insecticides for the control of insects on dairy animals and beef cattle and as space sprays or fogs in the farm buildings points toward better over-all results as the numbers and types of these dispersal machines are increased.

Oil Base Sprays

DURING the thirties and early forties, petroleum oils were used as carriers in most stock spray formulations. Water based emulsifiable insecticides had not met with wide success as yet and wettable powders were practically unknown. Petroleum oils ranged from the light mineral oil or kerosene type carriers to those having a viscosity as high as 80 S. S. U. at 100° F. In general, the stock sprays with the high viscosity bases were called the heavy oil types and regardless of the toxicant or repellent, if any, were known as repellent insecticides. Then, as now, heavy oil sprays were readily accepted in some sections of the U. S., even though their use was limited to treating farm animals directly and pointed primarily toward better control of stable, horse, and horn flies in the field.

Other dairy farmers, who were more concerned with insect control in the barn and in reducing biting fly attacks on the animals and attendants during the milking period, preferred the light mineral oil type of spray. Stock sprays with mineral oil bases should never be applied directly to

livestock except in a fog or spray form and in accordance with the directions on the manufacturer's label. Furthermore, these insecticides can be dangerous when used excessively or applied in other ways than as mist or fog sprays. Oil based stock sprays should never be poured on an animal or applied to its coat or hide with a soaked cloth or even used in any manner on very young stock.

In checking experimentally animal injury caused by certain petroleum oil straight cuts and blends, it has been found that overdosage is dangerous if it exceeds much more than two ounces per animal per day. At first these injuries are minor and consist of cracked, wrinkled or thickened skin and the casting or sloughing off of dandruffy parts of the hide, accompanied at times by a reduction of the milk flow. Most farmers warned by these signs reduce the amount of spray being used or stop it completely, and the animals recover in a few days. However, if this excessive daily dosage is continued or increased, the operator can expect real trouble, such as severe blistering, depression, the inability of the animals to eat, unnatural breathing, and in extreme cases even death.

Petroleum oils, considered harmless to most domesticated animals when applied properly and in small amounts, are still the most extensively used carriers for stock sprays. Reasons why this is so are: their properties for carrying to the insects toxicants and combinations of toxicants in complete solubility for the most part. In addition to being superb wetting and spreading agents, petroleum based stock sprays are finished insecticides ready for the dispersal unit. Their use aids in avoiding mistakes that can happen when the operator has to dilute concentrates. The temptation to make the finished material stronger than that recommended by the manufacturer, often leading to trouble, is also avoided. Continued use of petroleum stock sprays practically eliminates rusting or clogging of the spraying apparatus.

Emulsifiable Stock Sprays

AFTER DDT was made available for general use in 1945, emulsifiable stock sprays, along with wettable powders, came to the front and for a time threatened the very existence of oil based insecticides on the farm. These emulsions whether using DDT, other chlorinated hydrocarbons or combinations of them for a couple of years gave excellent control of house flies, horn flies, and other insects attacking livestock on the farm, although it is open to question if they ever noticeably reduced stable or horse fly populations. Wettable powders containing chlorinated hydrocarbons were also in great demand and, with the emulsions, opened up a new field of control. Before the advent of DDT and related compounds in water bases, not much could be done for the control of insects attacking animals on the range.

For the most part, petroleum oil based sprays were too expensive and the conditions under which they would have to be applied made it impractical to attempt to control insect attacks on beef cattle on the open range. How-

ever, DDT, TDE, methoxychlor, lindane, and other chlorinated hydrocarbons in emulsifiable formulations or as wettable powders were found to be inexpensive enough when sprayed on range animals in chutes, pens, corrals, or in other confined spaces. They often gave excellent results initially against horn and house flies, although their residual effect was of questionable value in controlling horse and stable flies. Resistance to these toxicants, particularly by house flies, was evident in many parts of the U. S. after two to four years of application.

Even though comparatively safe when applied in measured amounts on the animals, an undesirable feature was that some of the compounds such as DDT were stored in the fat of beef cattle or appeared in the milk of dairy animals. Wettable powders and emulsions containing chlorinated hydrocarbons as the toxicants are still used in the cattle country, particularly as sprays and dips for the control of horn flies, lice, ticks, and other insects. They also have an important place in the over-all planning for insect control as it pertains to domesticated animals on the farm as supplementary insecticides.

Emulsions containing relatively high percentages of pyrethrins fortified with chemicals having synergistic properties have been used in the past three or four years for the control of horn, horse and stable flies on beef and dairy cattle. These fortified pyrethrum emulsions are sprayed on the animals with specially designed hand operated dispensers, automatic sprayers, microsal units, and even hand guns. The results obtained under certain experimental conditions on one project have been spotty due to climatic conditions, mechanical failure, and the inability to get the desired coverage. The toxicants contained in the emulsions used, as was expected, killed all the flies hit by direct contact. There was some evidence to support the fact that two and possibly three of these pyrethrin synergist combinations were repellent to stable flies.

With the exception of certain chlorinated hydrocarbons, allethrin, possibly scabrin and, of course, the interesting and promising use of extenders to certain killing agents, there have been practically no new toxicants developed of late that could be called potent to insects but safe materials when applied to animals as stock sprays. Fifteen or more years ago the natural drugs, pyrethrum, rotenone and other cube extractives were in great demand as components for stock sprays. Today a stock spray formulation containing rotenone is an oddity, although this toxic agent is still considered a standout in regard to safety plus killing power when applied to livestock. Ever since its first use as a toxicant in the compounding of stock sprays, pyrethrum has been considered an outstanding example of an effective agent in combating insects that attack man or animals, and for the wide margin of safety it affords. Whether used alone or with extenders, such as synergists, activators, or anti-oxidants, thereby adding to its toxicity, repellency, and longer lasting properties, it is perhaps the most effective and safest killing agent one could use against flies on the farm.

Synthetic compounds such as the thiocyanates have been used as toxicants in many stock spray formulas for over twenty years. Some of these materials have considerable merit, perhaps the most noticeable being their quick and effective knockdown of insects attacking farm animals and their potency as killing agents in combinations with pyrethrins, DDT, methoxychlor, lindane and other chlorinated hydrocarbons and other toxicants. While much more work needs to be done with the comparatively new synthetic, allethrin, there is some evidence to support the finding that it is not as effective as a killing agent against biting flies, when compared weight for weight with pyrethrins. This also appears to hold true when allethrin is compared with pyrethrins as a repellent, although the field method used in the study had serious limitations.

Repellency tests in the field, considered by many investigators as necessary, are often misleading. Even when the techniques employed appear to be sound, the differences in attractiveness to biting flies in breeds of cattle, individual animals of the same breed and the day to day differences of one individual animal in its appeal to blood feeding flies, often give results that are most difficult to interpret from one time interval to the next on the same day.

Flies Top Problem

WHILE the livestock owner has to contend with many insects, such as mites, lice, ticks, and mosquitoes, flies continue to be his most serious problem. The biting or blood-sucking species including the horn, deer, horse, and stable flies are most annoying to cattle, and if present in sufficient numbers, may interfere with milk production. In northern Illinois, stable and horn flies are the most common pests of cattle and, of the two, the stable fly is most troublesome. This species generally feeds once during the warmer part of the day with heads pointed upwards, and when gorged, leaves the animal to rest until its blood meal has been digested. The horn flies, on the other hand, sometimes in enormous numbers, generally remain on the animal, except when laying eggs. With heads pointed down they usually feed in groups or clusters on the milk veins, at the base of the horns and on the animal's sides.

Because most horn flies develop from the egg through to the emerging adult in cow droppings on the range or in the pasture, it is practically impossible to control them by ordinary sanitation methods. However, any dairyman or livestock owner can cut an extremely high population of horn flies to a practical minimum by faithfully following a spray schedule and employing an oil based stock spray or emulsifiable or wettable powder as the insecticide.

House flies at times are the most numerous species found around the dairy barn, out buildings, and milk room. They are a prime nuisance and, of course, recognized all over the world as spreaders of many diseases. During the warmer months, these pests are the worst contaminators of materials and equipment used on the farm in the processing and handling of milk for market. They do not appear to irritate the animals as much as the blood-sucking species. Nevertheless,

(*Turn to Page* 177)

Record C. S. M. A. Meeting

THE spectacular growth of the aerosol industry, with a 1952 production of nearly 100 million units; a 15 percent increase in the volume of liquid insecticides packed last year, as compared with the previous year; the effects of waxing vinyl floor coverings, and details on the new Goodrich insecticide "Strobane" were among the highlights of the discussion at the 39th mid-year meeting of the Chemical Specialties Manufacturers Assn., May 18 and 19, at the Hotel Drake, Chicago. Attendance of over 700, with 680 registrations, made the meeting the largest mid-year gathering in the history of the association.

C.S.M.A. will hold its 40th annual meeting at the Mayflower Hotel in Washington, D. C., Monday and Tuesday, Dec. 7 and 8. A special program is planned to celebrate the 40th anniversary of the association.

Labels and labeling were covered in meetings of two of the six divisions of which C.S.M.A. is now composed, as well as in a report by the association's counsel, John D. Conner of Washington, D. C., in the general session, May 19.

A new interim federal specification for water emulsion, slip resistant, floor wax, P-W-00151b of the General Services Administration, Federal Supply Service, was announced for the first time during a meeting of the association's Waxes and Floor Finishes Division. A procedure for floor testing of water emulsion floor wax as conducted by the G.S.A.-F.S.S. was outlined in a paper at the same session. Another feature of the wax division's meeting was a round table discussion of the recently released third set of proposed trade practice rules for the floor wax and floor polishes industry.

Officers of the administrative committees of the six divisions of C.S.M.A. were elected at the meeting and a nominating committee to name a slate of officers and directors to be announced at the December meeting was chosen. Officers and directors are elected at the annual meeting in December.

H. R. Shepherd of Connecticut Chemical Research Corp., Bridgeport, Conn., was chosen chairman of the administrative committee of the Aerosol Division, succeeding Dr. Edmond G. Young of the Kinetic Chemicals Division of E. I. du Pont de Nemours & Co., Wilmington, Del. Dr. Young continues on the committee, other members of which are W. Earl Graham, Crown Can Co., Philadelphia, re-elected vice-chairman; Charles E. Beach, John C. Stalfort & Sons, Baltimore; and H. G. Mackintosh, Standard Oil Co. (Indiana), Chicago.

Re-elected chairman of the Automotive Division is J. M. Kimmel of Aeropak, Inc., Chicago. The new vice-chairman is A. James Coulter of Gulf Oil Corp., Pittsburgh, who succeeds Ralph O. Cowin. Mr. Cowin is retiring from Standard Oil Co. of Ohio, Cleveland. Two new members of the administrative committee are John Conway of Carbide & Carbon Chemical Co., New York, and C. A. Weslager of the Fabrics and Finishes Department of E. I. du Pont de Nemours & Co., Wilmington. N. J. Gothard of Sinclair Refining Co., Harvey, Ill., continues as the fifth member of the committee.

Continuing to serve on the administrative committee of the Disinfectant and Sanitizers Division are Russell G. Puhle of Tykor Products Division, Borden Co., Brooklyn, N. Y., chairman; Roland S. Shumard, Monsanto Chemical Co., St. Louis, vice-chairman; and Harold G. Lederer, R. M. Hollingshead Corp., Camden, N. J. New members of the committee are A. G. Bowers, Hunt Manufacturing Co., Cleveland, and J. B. Dienna, Rohm & Haas Co., Philadelphia.

The new chairman of the administrative committee of the Insecticide Division is George W. Fiero of Esso Standard Oil Co., New York, who moved up from the post of vice-chairman. Arthur Rasmussen of Furst-McNess Co., Freeport, Ill., a new member of the committee, was elected vice-chairman. H. W. Moburg of Rex Research Corp., Toledo, continues to serve on the committee, the other two members of which, both new, are A. E. Badertscher of McCormick & Co., Baltimore, and Robert C. White, Jr., of Robert C. White Co., Philadelphia.

Daniel H. Terry of Bon-Ami Co., New York, continues as chairman of the Soap, Detergents and Sanitary Chemical Products Division's administrative committee, with George E. Barker of Atlas Powder Co., Wilmington, Del., as new vice-chairman. Other members of the committee, all of whom are new, are W. C. Bennett of C. B. Dolge Co., Westport, Conn., F. J. Pollnow, Jr., of Vestal, Inc., St. Louis, and F. T. Lanners of Economics Laboratory, Inc., St. Paul.

A. E. Budner of S. C. Johnson & Son, Inc., Racine, Wis., was advanced to chairman of the Waxes and Floor Finishes Division's administrative committee, succeeding Donald M. King of Masury Young Co., Boston. C. S. Kimball of Foster D. Snell, Inc., New York, remains as vice-chairman. Other committee members, all new, include F. H. Lyons of E. L. Bruce Co., Memphis, Tenn.; R. E. Sievert of Frank B. Ross Co., Jersey City, N. J., and Earl Brenn of Huntington Laboratories, Inc., Huntington, Ind.

The nominating committee elected at the meeting is composed of Leonard J. Oppenheimer of West Disinfecting Co., Long Island City, N. Y., chairman; Dr. Edmond G. Young, Kinetic Chemicals Division, E. I. du Pont de Nemours & Co., Wilmington; Richard T. Yates, Hercules Powder Co., Wilmington; James A. Green, Standard Oil Co. of Indiana, Chicago, and Abe Weiner, Standard Naphthalene Products Co., S. Kearny, N. J.

Three simultaneous divisional meetings, the morning of May 18, marked the formal opening of the two day convention. Meeting simultaneously were the Aerosol Division, the Disinfectant and Sanitizers Division and the Soap, Detergents and Sanitary Chemical Products Division.

Aerosol Symposium

THE feature of the Aerosol Division meeting was a symposium dealing with pressurized paints. J. J. Gregory of Chase Products Co., Maywood, Ill., acted as moderator for the symposium, which was preceded by the address of the division chairman, Dr. E. G. Young of Kinetic. Speaking on the "Formulation of Aerosol Lacquers," Dr. Fred S. Palmer of the Jackson Laboratory of E. I. du Pont de Nemours & Co., Wilmington, discussed ways in which major problems are being solved in formulating top-quality aerosol lacquers.

Dr. Palmer outlined results of more than a year's research into nitrocellulose lacquer formulations. Aerosol application of products of that type, he pointed out, is particularly desirable because of the rapid drying rate and poor brushing characteristics usually associated with nitrocellulose finishes.

Principal difference between conventional brush or spray lacquers and the aerosol types is the addition of a propellent to force lacquer from the can in a fine spray. As propellents, Du Pont's "Freon-12" dichlorodifluoromethane and "Freon-11" trichloromonofluoromethane also served as thinners in nitrocellulose lacquers, the Du Point chemist explained.

Unlike 'true" lacquer solvents, such as methyl ethyl ketone and methyl isobutyl ketone, the "Freon" fluorinated hydrocarbons will not dissolve nitrocellulose, and the quantity used must be carefully controlled to avoid precipitation of the nitrocellulose. The diluent action of the propellent requires use of a greater proportion of "true" solvents in aerosol formulations than in those intended for conventional methods of lacquer application.

Most lacquers, Dr. Palmer noted, use nitrocellulose and a modifying resin as the film-forming material. In high durability finishes like automotive lacquers, the modifying resin usually is a non-oxidizing alkyd resin. Permissible proportion of propellent is less with the latter than with nitrocellulose.

Spray characteristics of an aerosol coating composition, he said, are affected "very markedly" by the consistency of the material. Normally, consistency is controlled by selection of types and amounts of various ingredients and, in this respect, aerosol products are not essentially different from those intended for application by other methods.

A concentration of 40 per cent "Freon-12" dichlorodifluoromethane gives pressures of 40-45 pounds per square inch (gauge pressure) with both methyl isobutyl ketone-base and butyl acetate-base lacquers, Dr. Palmer said. Since such formulations contain 25 per cent solids, that is about the maximum pressure obtainable because of the limited compatibility of higher concentrations of propellent. As the solid content is lowered, however, the concentration of propellent can be increased slightly. When an 80/20 solution of "Freon-12" and "Freon-11" trichloromonofluoromethane is used as the propellent, a 55-60 per cent concentration of propellent gives pressures of 45-50 pounds per square inch. That concentration, he noted, is the maximum which can be used in the methyl isobutyl ketone-base lacquers.

While a formulation which sprays well usually gives good coatings, the properties of various lacquer films depend upon the behavior of their ingredients after application. Rapid evaporation of lacquer solvents as the coating dries, for example, causes a cooling effect which may condense moisture from the air on a freshly applied lacquer coating. This causes the film-forming materials to precipitate in a granular or discontinuous condition, known as "blushing," which impairs the appearance, strength, clarity, and other properties of the film. This cooling is exaggerated in the aerosol method of applying lacquers, Dr. Palmer explained, because the propellents increase the evaporation rate. Blushing can be avoided, he said, by adding a small amount of high-boiling solvent to the formulation so that in later drying stages any precipitated material is redissolved and blended into the final film.

Other defects which must be watched for are bubbles and craters, orange peel, lifting, and color change during storage. Bubbles and craters in aerosol lacquer coatings, the Du Pont chemist explained, most often result from an improper solvent balance. This defect can be avoided by using a high-boiling solvent in the formulation to impart flow to the coating in final drying stages. Excessively heavy coatings also should be avoided.

Careful control of viscosity and propellent compatibility are required to prevent orange peel imperfections.

Lifting — caused by softening of the first coat when a second is applied over it — is more pronounced in lacquers containing high concentrations of strong solvents, he said. Although a "rich" solvent is desirable for increasing propellent compatibility in aerosol lacquers, careful adjustment of the solvent balance is required to minimize lifting.

Propellents used in aerosol lacquer formulations do not affect gloss or color stability of finishes. Some cases of yellowing of aerosol lacquers during storage have been reported, especially among the white lacquers. While such defects are not peculiar to aerosols alone, it is recommended that the steel balls, normally placed in aerosol coating packages to help agitate the solids, be replaced with porcelain, glass, or stone balls, Dr. Palmer concluded.

Following a discussion of "Progress in Development of Aerosol Paints" by George A. Nichols, technical director of the paint and varnish factories of Sears, Roebuck & Co., Chicago, Louis F. Body, president of Body Brothers, Inc., Cleveland, presented a paper on "The Consumer and Aerosol Paint." In addition to good merchandising, "there are at least three other qualifications necessary to producing a good (aerosol paint) prod-

Aerosol And Pressurized Products Survey 1952
Chemical Specialties Manufacturers' Association, Inc.

Number of Units Packed — 1952

Product	High Pressure	Twelve Ounce	Six Ounce and Less	1952 Total	1951 Total
Space Insecticides	610,349	29,456,906	2,060,568	32,127,823	15,528,810
Residual insecticides (roach and ant sprays, etc.)		1,473,178	276,312	1,749,490	985,970
Mothproofers		1,940,410	21,931	1,962,341	804,030
Room deodorants		6,950,386	5,459,882	12,410,268	7,286,809
Pigmented and metallic paints		4,344,035	143,373	4,487,408	1,780,658
Clear plastic sprays		2,219,556	14,915	2,234,471	952,188
Other household products (waxes, insect and water repellents, rug shampoo, etc.)		1,951,897	1,147,971	3,099,868	218,787
Shaving lather		3,171,976	13,510.402	16,682,378	
Other personal products (shampoos, perfumes, personal deodorants, sun tan oil, hair lacquer, foot sprays, etc.)		2,245,658	6,521,151	8,766,809	3,649,396
Miscellaneous products (Christmas novelties, dog sprays, mildew preventives, medicinals, lubricants, ignition & antistatic sprays, etc.)		9,685,013	3,413,036	13,098,049	2,977,502
TOTAL	610,349	63,439,015	32,569,541	96,618.905	34,184,150

uct," Mr. Body said. These qualifications he listed as:

1.) The filler should have the technical know-how and the facilities to produce a good package.

2.) A good valve suitable for paint is necessary.

3.) Most important, the paint must be specially formulated to operate correctly with "Freon" gas.

Mr. Body called for a cooperative effort on the part of the filler, the valve manufacturer, the propellent maker and the paint manufacturer to do a top notch job in producing a satisfactory aerosol paint.

The concluding paper of the Aerosol Division meeting, May 18, was a report of the 1952 aerosol product survey, by Dr. E. G. Young, of Du Pont, and chairman of the division's administrative committee. The report showed that:

The aerosol industry packed just short of 100 million units of aerosol products in 1952, almost tripling its previous year's record.

The report, based on production figures supplied by 31 organizations either loading their own products or doing contract loading for other marketers, showed 96,618,905 units packed last year, as compared with 34,184,150 in 1951. That represents 99 per cent of the nation's production of pressure-packed products, reported Dr. Young and indicates a retail value of about $105 million in products.

Increases of 170 to 1417 per cent were listed for various product groups included in the survey, conducted for the association by Ernst & Ernst, New York certified public accountants. The study covered all chemical specialty items now being pressure-packed, but did not include food items such as whipped cream.

Although some newer types of pressure-dispensed products showed more rapid growth, the biggest volume loaded last year were space insecticides and room deodorants. The survey indicated that 32,127,823 units of the insecticides were packed last year, as compared with 15,528,810 in 1951. Aerosol room deodorants production in 1952 was 12,410,268 units, nearly twice the 7,286,809 figure of the preceding year.

Miscellaneous household products, including waxes, insect and water repellents, rug shampoos, and similar items, many of which were introduced in aerosol form only in the last year, jumped to 3,099,868 units in 1952. Only 218,787 units of such products were reported as having been loaded in 1951.

Particularly strong growth was noted in personal products field, where the 1952 production of 25,449,187 units was seven times the 1951 figure of 3,649,396. Included in that group were shaving creams, shampoos, perfumes, personal deodorants, sun tan oil, hair lacquer, and foot sprays.

Among the personal products, aerosol shaving creams made such rapid gains in 1952 that production figures were broken down for the first time into shave creams and other items. The aerosol shave aids accounted for 16,682,378 units of the 25,449,187-unit production of personal products last year, showing a seven-fold increase over 1951.

Miscellaneous products which included Christmas "snow," dog sprays, mildew preventives, medicinals, lubricants, ignition and anti-static sprays, and similar products, accounted for 13,098,049 units of the 1952 production, as compared with 2,977,502 units of the same products the previous year.

The association's survey included a breakdown of products by container size and indicated that the overall 1952 aerosol production consisted of 63,439,015 twelve-ounce containers including 5,300,000 units of space insecticides for the armed forces, and 32,569,541 units of six ounces or less. Also included were 610,349 high pressure units of space insecticides.

Complete production figures released by the association on the basis of the survey are shown in accompanying table.

Following is the list of companies which reported data for inclusion in the 1952 Aerosol and Pressurized Products Survey conducted by the Chemical Specialties Manufacturers' Association:

American Aerosol Insecticide Corp., Holland Mich.
American Potash & Chemical Corp., Los Angeles, Calif.
George Barr & Co., Chicago
Bostwick Laboratories, Bridgeport, Conn.
Boyle-Midway, Inc., Chicago
Bridgeport Brass Co., Bridgeport, Conn.
Campbell Products Co., Bensenville, Ill.
Cardel Enterprises, Toronto, Ontario, Canada
Carter Products Co., Inc., New Brunswick, N. J.
Chase Products Co., Maywood, Ill.
Chemi-Form Corp., Chicago
Connecticut Chemical Research Corp., Toronto, Ontario, Canada
Continental Filling Corp., Danville, Ill.
De Mert and Dougherty, Inc., Chicago
Engine Parts Manufacturing Co., Cleveland
Eveready Pressurized Products, Inc., Cleveland
Fluid Chemical Co., Inc., Newark, N. J.
Hampton Products Co., Portland, Pa.
Knapp-Monarch Co., St. Louis
Larson Laboratories, Erie, Pa.
National Tea Company, Chicago
Powr-Pak, Inc., Bridgeport, Conn.
Protective Coatings Corp., Park Ridge, Ill.
Puritan Distributing Co., Boston
Rayette, Inc., St. Paul, Minn.
Regal Chemical Corp., Brooklyn
Spray Pack Products Co., Cleveland
Sprayon Products Co., Cleveland
Stalfort Pressure-Pak, Inc., Baltimore
George M. Watson & Co., Ltd., Toronto, Ontario, Canada
Woodlets, Inc., Portland, Pa.

Disinfectant Division

IN opening the first session of the Disinfectant and Sanitizers Division, the morning of May 18, chairman Russell G. Puhle, Tykor Products div., Borden Co., Brooklyn, explained that the purpose of the division is to cooperate and collaborate in solution of problems arising in this field and to keep the membership informed of new developments. He commented that members are not taking full advantage of the services available and urged them to come forward with their problems.

First of the two papers presented at this session dealt with the investigation of Diversey Corp., Chicago, in the control of fish-bone disease in humans through sanitation. John Ellis of Diversey's research staff, who read the report, based on work by himself and C. K. Crocker, told how use of his company's product, "Diversol," had been demonstrated as an effective means for control of erysipeloid, the widely prevalent occupational disease of workers in the commercial fishing industry. The complete paper was published in the May issue of *Soap and Sanitary Chemicals*.

Next speaker, Richard R. Egan, Gerson-Stewart Corp., Cleveland, O., reported on the use of Monsanto Chemical Co.'s germicidal compound, "Actamer," in his company's liquid soaps. Mr. Egan and Mary D. Reed were co-authors of the paper. Up until late in 1952, he said, no germicide available had approached the effectiveness of hexachlorophene for this application. He described the procedure followed in evaluating use of "Actamer" in various types of soap, with consideration given to effect of pH and iodine values, and reported on the remarkable reduction in bacteria count which followed on hands of the test subjects. The study, Mr. Egan declared, fully justifies the degerming qualities that Monsanto claims for its product. "There is no question," he said, "that Actamer is a very good

germicide for use in soap. It has remarkable antiseptic properties, with little or no tendency to cause skin irritation."

Soap Division

A SYMPOSIUM discussion of "Organic Additives to Detergent Mixtures" was the highlight of the meeting of the Soap, Detergents and Sanitary Chemical Products Division, the first morning of the convention. E. J. Black of Warwick Chemical Co., Long Island City, N. Y., was moderator.

The use of CMC (carboxy methylcellulose) in detergents was described by the panel's first speaker, Dr. H. R. Suter, director of application research for Wyandotte Chemicals Corp., Wyandotte, Mich. CMC acts to improve detergency of the synthetics for cotton washing by strong adsorption on the cotton fiber and thus assists in the adsorption of the detergent molecules.

In discussing the use of se-

Top row, l. to r.: Jacob Kahn, Windsor Wax Co., Hoboken, N. J.; Harold G. Lederer, R. M. Hollingshead Corp., Camden, N. J. and Jacob Broncato, Cato Chemical Co., Chicago. Gerard R. De Napoli, Masury-Young Co., Boston; G. A. O'Haire, Congoleum-Nairn Co., Kearny, N. J., and P. A. Sigler, Bureau of Standards, U. S. Dept. of Commerce, Washington, D. C. Miss Evalyn Sarich, Warwick Wax Co., Long Island City, N. Y. and Miss Mary Sears Storms, Gimbel Bros., New York.

Second row: William A. Hadfield, Pennsylvania Salt Mfg. Co., Philadelphia and L. S. Stuart, U. S. Department of Agriculture, Washington, D. C. Dr. George E. Decker, department of entomology, University of Illinois, Urbana; Ralph Dysart and Don Starr, both of S. B. Penick & Co., New York. W. W. Lewers, consultant, Brooklyn, N. Y. and Thomas Reilly, General Electric Co., Waterford, N. Y.

Third row: Dr. E. I. Stearns, Calco Chemical Division, American Cyanamid Co., Bound Brook, N. J.; Miss Muriel E. Liften, Helene Curtis, Inc., Chicago, and Hans K. Weiss, Armour & Co., Chicago. Patrick Connolly, S. B. Penick & Co., New York, and Glen Piper, E. I. du Pont de Nemours & Co., Wilmington, Del. Melvin Fuld, Fuld Brothers Co., Baltimore; Fred S. Palmer, Jackson Research Laboratory, du Pont, Wilmington; A. Barde Rogers, Armour & Co., Chicago.

Fourth row: Frank Pollnow, Jr., Vestal, Inc., St. Louis; Al. Stepan, Stepan Chemical Co., Chicago, James V. Cawley, MODERN SANITATION, and Frank J. Reilly, SOAP & SANITARY CHEMICALS, both New York. Philip Harris and Henry Blanchford, both of Mac-Lac Co., New York and J. E. Sternberg of Mantrose Corp., Brooklyn. T. Carter Parkinson, McCormick & Co., Baltimore; Charles Lichtenberg, Chicago Sanitary Products Co., and Sol Epstein of Emulsol Corp. Chicago.

Fifth row: Alvin D. Keene, Jr., and William Eddy of Rochester Germicide Co., Rochester, N. Y. and Richard T. Yates of Hercules Powder Co., Wilmington. A. G. Bowers, Hunt Mfg. Co., Cleveland; L. J. Oppenheimer, West Disinfecting Co., Long Island City, N. Y.; William Meyer, E. F. Drew & Co., New York; Wm. Paul, Drew, Chicago. Herbert L. Sanders, Richard Petersen, Ninol Laboratories, Chicago; H. R. Suter, Wyandotte Chemicals Corp., Wyandotte, Mich., and Owen Carpenter, Antara Chemicals Div., General Dyestuff Corp., New York.

questering agents in detergent mixtures, H. W. Zussman of Alrose Chemical Co., Providence, R. I., pointed out that the price in sequestering agents may decline if they are used widely as tracer feed elements in agriculture. This is speculative, he said, adding that it would be a long time before sequestering agents will compete with the polyphosphates.

The use of brightening agents to improve whiteness was discussed by E. I. Stearns, Calco Division, American Cyanamid Co., Bound Brook, N. J. Substantive brighteners have been used in the soap industry since 1942, he said. Today most soaps and detergents contain brighteners, Dr. Stearns stated. The four properties of brighteners listed by the speaker are substantivity, absorption, conversion and hue. Because brighteners vary in substantivity to cellulose and noncellulose fibers, it is necessary to include two types of brighteners in detergents and soaps to cover the full range of fabrics. Approximately one pound of brightener is required for one ton of soap or synthetic detergents. Dr. Stearns concluded his talk by showing how brighteners work using a yellow slide and an auxiliary light of three different shades of blue. By projecting the light with the blue slides on the yellow band various degrees of whiteness appeared on the yellow.

"Foam Stabilizers and Boosters," the next topic on the panel, was discussed by H. L. Sanders of Ninol Laboratories, Chicago. Although foaming power contributes little to the efficacy of synthetic detergents, the consuming public demands higher and higher foaming, Dr. Sanders stated. Foam does not indicate the exhaustion of detergency power, nor is it necessary to have in a detergent. Its indicator action of exhaustion of detergency power is quite precise in the case of soap, but not so in synthetic detergents, Dr. Sanders explained. Anything that can be done to stabilize foam goes a long way toward selling the consumer on detergent products, the speaker said.

Gum type foam stabilizers form a film around detergent bubbles and support them, Dr. Sanders pointed out. There is not much application of the gum type foam stabilizers in detergents because of the high concentration required to be effective.

Alkylolamide stabilizers are used in every type of detergent on the market today, according to Dr. Sanders. 10 to 20 percent of the total active detergent in the mixture is the effective range of the alkylolamides, of which several million pounds are used per year, Dr. Sanders explained.

The problem of perfuming soaps and detergents was discussed by Victor DiGiacomo of Givaudan-Delawanna, Inc., New York, final speaker of the panel. He said that when detergents were first introduced to the household market their perfuming was ignored. Later, perfume oils normally used in soaps were tried, but these were found to be not compatible with detergents.

The selling value of a pleasantly perfumed product should not be under-estimated, since odor does have a definite consumer appeal, Mr. DiGiacomo pointed out.

The perfuming of detergents creates certain problems. The perfumer of these products must know their physical and chemical properties. Detergent additives create additional problems for the perfumer of detergents. Sometimes they neutralize or cause a breakdown of the perfume, Mr. DiGiacomo explained.

Household detergent perfumes differ from those for industrial detergents. Household products must not have too strong an odor. Too strong an odor on dishes may be offensive, particularly if the odor is a residual one. The consumer preference for an odor is of the utmost importance since it plays such a large part in the housewife's choice of a product.

Other factors to be considered in choosing a perfume for a product, as outlined by the speaker, included the effect of the perfume on the package and how well the perfume behaves in storage.

Perfuming of liquid detergent products is easier than perfuming of powder and other types of dry products, according to Mr. DiGiacomo.

Concentration of the perfume depends on odor type and end use. Low perfume concentrations should be used in today's detergent, Mr. DiGiacomo stated. Shelf life testing and accelerated heat and cold tests of products with various perfumes should be undertaken before marketing. The testing of the perfume in hot water was also recommended by the speaker.

The group luncheon, May 18, presided over by C. L. Weirich, C.S.M.A. president, heard an address by Dr. Gustav Egloff, director of research for Universal Oil Products Co., Des Plaines, Ill. New developments in synthetic materials ranging from a nylon rug, worth $50 a square yard, to a bullet-proof vest of the same material now in use on the Korean front, were described and samples distributed by Dr. Egloff. William B. Plummer,

Captions, Facing Page

Top row, l. to r.: William Weed, Niagara Alkali Co., New York, Jack L. Wilson, Pennsylvania Industrial Chemical Corp., Clairton, Pa., and Abe Weiner, Standard Naphthalene Products Co., S. Kearny, N. J. Melvin Goldberg, Pesticide Advisory Service, New York and A. C. Stepan, Stepan Chemical Co., Chicago; R. O. Cowin, Standard Oil Co. of Ohio, Cleveland, and James A. Green, Standard Oil Co. of Indiana, Chicago.

Second row: Friar M. Thompson, Jr., Athens, Ga., William Zick and Preston Heller of B. Heller & Co., Chicago. Group looking over registration cards. Dr. Gustav Egkoff of Universal Oil Products Co., Des Plaines, Ill. and Clarence L. Weirich of C. B. Dolge Co., Westport, Conn.

Third row: R. McWilliam, Horix Mfg. Co., Pittsburgh and Harold S. Riker, Curley Co., Philadelphia. Charles Furst, Furst McNess Co., Freeport, Ill. and A. F. Guiteras, New York. Arthur Carter, Sherwin-Williams Co., Montreal; N. J. Gothard, Sinclair Refining Co., Harvey, Ill. and William Flatow, West Disinfecting Co., Long Island City, N. Y.

Fourth row: Ralph Hamilton and Cameron Baird, Baird & McGuire, Inc., Holbrook, Mass. Vladimir Dvorkovitz, Diversey Corp., Chicago, Harry E. Peterson, Continental Filling Co., Danville, Ill., and Russell Puhle, Tykor Products Div., Borden Co., Brooklyn. Carlos Kampmier and Irving R. Roberts, both of Rohm & Haas Co., Philadelphia.

Fifth row: A. Kresser and Mrs. Edith Ault of Cornelius Products Co., New York. John Weiller, McCormick & Co., Baltimore; Carl Dolge, C. B. Dolge Co., Westport, Conn., and Amos Baedertscher, McCormick. John Clark and William S. Jessop of U. S. Sanitary Specialties Co., Chicago.

Sixth row: William Moburg, Rex Research Corp., Toledo and William Janney, National Can Co., New York; Roland Shumard, Monsanto Chemical Co., St. Louis and George Hartz, John Powell & Co., New York. R. E. Dodd, Durez Plastics & Chemicals, Inc., North Tonawanda, N. Y.; Donald B. Peck and David C. Stewart, Fuller Brush Co., Hartford, Conn.

Household and Industrial Insecticide Survey—1952 (1951)

Expressed in pounds

Chemical Specialties Manufacturers Association

	Packaged in units of															
	Less than 4 oz.		4-8 oz.		8-16 oz.		1-5 lbs.		5-10 lbs.		10-25 lbs.		25 lbs.		Over 25 lbs.	
	1952	1951	1952	1951	1952	1951	1952	1951	1952	1951	1952	1951	1952	1951	1952	1951
Livestock wettable powders—to be suspended in water					24,170	23,617	475,265	527,567	28,303	29,375	22,210	7,136			174,480	252,980
Powders—for application without water	66,055	56,557	37,400	30,469	655,427	525,677	549,515	513,336	340,917	637,967	1,175	1,024	24,075	256,725	54,195	52,590
Mothicide — crystals, balls, flakes, etc.			1,820,182	1,669,544	1,118,021	1,078,908	10,933,526	10,146,603	855	780	520	900	2,225	1,825	3,471,738	4,775,802
TOTALS	66,055	56,557	1,857,582	1,700,013	1,797,618	1,628,202	11,958,306	11,187,506	370,075	668,122	23,905	9,060	26,300	258,550	3,700,413	5,081,372

president of Indoil Chemical Co., Chicago, introduced Dr. Egloff.

Automotive Meeting

"WHAT the Automotive Jobber Looks for from the Automotive Specialty Manufacturer" was the topic discussed in the first paper at the afternoon session of the Automotive Division, May 18. Frank Beis, sales manager of Chicago Auto Parts Co., Chicago, was scheduled to present the paper, but because of illness was unable to appear. J. M. Kimmel, Aeropak, Inc., Chicago, division chairman, read Mr. Beis' paper.

The services performed by the Chemical Specialties Manufacturers Assn. that can benefit the automotive specialty manufacturer were discussed by H. W. Hamilton, C.S.M.A. secretary, in a talk bearing the title "What the CSMA Can Offer the Automotive Specialty Manufacturer."

Insecticide Division

THE Insecticide Division's first session, Monday afternoon, was marked by two outstanding developments. After several years of study and discussion the division adopted as an official standard the proposed CSMA method for analysis of refined and commercial allethrin. Commenting on the significance of this action, James A. Green, Standard Oil Co. (Ind.), chairman, said this was a "red letter day" in the division's history. "Our action," he declared, "means the birth of a test for cockroaches with allethrin, comparable to the Peet-Grady test for flies."

Second important feature of the program was the release of figures showing that in 1952 the industry produced 13 million gallons of insecticides with a retail value of about $33,000,000. This was an indicated increase of 15 percent over 1951. The report, based on a survey by Ernst & Ernst, New York accounting firm, showed that household type sprays alone accounted for over two-thirds of last year's production. Among other findings from the survey were the following:

Powdered insecticides, including wettable types and crystalline forms of mothicides, showed losses ranging from 1½ to 14 percent last year. Principal losses in the solid products were in livestock wettable powders, of which 1952 production was estimated at 725,000 pounds. Other powdered insecticides accounted for 1.7 million pounds of the 1952 production but were down about 14 percent from 1951. Mothicides, whose 1952 production was 17.3 million pounds, were only about 1½ percent under the previous year. Complete survey figures are shown in the accompanying tables.

Dr. George W. Fiero, of Esso Standard Oil Co., New York, who presented the report, explained that 38 percent of the 250 manufacturers contacted, returned the questionnaire and that the figures reported were a statistical projection of those returns. He recalled that during the war "guesses" at the volume of insecticide production ranged from 10 to 50 million gallons.

This survey, he said, covered all but one of the largest producers of fly sprays, so that the survey figure represented 70 percent of that type of spray. For powdered insecticides only one-fourth to one-half the producers were represented in the returns. He was hopeful that firms which did not respond to the questionnaire would do so for the 1954 survey.

On three household items, residual and space sprays, and fabric pest sprays, he added, the survey figures indicated sales of from $21 to $25 millions out of the industry total of $33 millions for all products covered in the survey. In household type sprays preference was indicated for residual sprays, which accounted for 60 percent of the 1952 production, the rest going into space sprays.

Among residual sprays the survey showed a definite trend toward formulations containing chlordane and a decrease in production of DDT sprays. About 41 percent of the residual sprays contained chlordane, as compared to 36 percent in 1951. DDT sprays last year accounted for 19 percent of the household spray production, as compared with 25 percent in 1951.

Dr. D. L. Kent of Goodrich

Household and Industrial Insecticide Survey—1952
Chemical Specialties Manufacturers Association

Number of unit sales at manufacturers level—1952 (1951)

	Less than Pint		Pint		Quart		Gallon		Gallons Five Gallons and Over	
	1952	1951	1952	1951	1952	1951	1952	1951	1952	1951
Space sprays—with knock down agents such as pyrethrins and activators, thiocyanates, allethrin, etc., with not more than 2% DDT	25,488	19,936	7,452,490	6,970,646	2,931,932	2,830,548	357,440	315,387	404,475	287,204
Residual sprays										
With 2½% to 6% DDT with or without other materials except chlordane	499,126	336,423	3,544,372	4,551,968	1,506,900	1,930,892	98,257	109,624	154,006	345,739
With chlordane, with or without other materials	326,707	89,625	9,155,221	7,328,136	3,072,435	2,721,340	102,987	141,570	608,711	28,285
Fabric pest sprays—products specifically recommended for treating fabrics for moth control, etc.	17,112	19,608	1,423,061	39,173	534,098	28,806	28,681	14,958	27,064	5,185
Livestock sprays—oil base products to be used without dilution.	35,292	9,010	14,190	10,896	363,708	99,388	667,602	806,198	571,210	506,238
Livestock emulsion concentrates—to be diluted with water	106,179	114,620	112,103	86,652	276,246	277,080	50,078	52,811	25,343	39,565
Emulsion concentrates other than livestock—to be diluted with water (non agricultural)	533,900	503,208	226,824	211,560	99,212	69,208	29,259	21,167	108,282	212,295
Concentrates—to be diluted with petroleum base (non agricultural)							3,994	3,382	15,665	24,995
Stored grain sprays					5,000	5,000	21,769	26,436	55,970	35,604
TOTALS	1,543,804	1,092,430	21,928,261	19,199,031	8,789,531	7,962,262	1,360,067	1,491,533	1,970,726	1,485,110

Chemical Co., Cleveland, O., reported to the insecticide section on results from three years study of "Strobane," a new basic insecticidal material, not yet available commercially. When its potentialities have been fully developed, he promised that all pertinent data will be made available to the industry. There appear to be no difficulties, he said, in its formulation for aerosols, liquid fly sprays, livestock sprays and other applications. Emulsifiable concentrates are also easy to manufacture, he said.

"Strobane," according to Mr. Kent, is a chlorination product of a mixture of terpene hydrocarbons. For aerosol use it has several unique characteristics, in that no aromatic solvent is required to hold the new compound in solution and there is no objectionable residue.

For household sprays it does not possess adequate knockdown ability unless in combination with other compounds, such as pyrethrum, "Lethane," etc. Tests were run against roaches but not by the official method. On silverfish, house spiders and bedbugs there was a 100 percent mortality in 48 hours. Tests on residual action and resistance are incomplete. There are no limiting toxicological characteristics in several forms of application. In the agricultural field tests against many insects appear good, also on mosquito larvae and pupae. As to cost, Dr. Kent said pilot plant operations indicate that strobane will be competitive with more commonly used products. The paper by Mr. Kent and co-authored by Friar Thompson, consultant of Athens, Ga., and Frank O. Hazard, Wilmington, O., College begins on page 157.

In a paper on "Application of Radioactive Tracers to Insecticide Research," Dr. Paul A. Dahm, Kansas State College, Manhattan, Kans. reviewed the nature and source of radioactive isotopes. There are about 1,016 such isotopes, according to Dr. Dahm, who told who is using them in the insecticide field, how they are being used, and something about results from some of this work.

The tracer method, he said, is more sensitive than chemical and spectroscopic methods and sometimes reveals the presence of materials which those other methods do not indicate. He cited, as an instance, the discovery of certain matter in roach feces, which none of the other methods had ever shown. The tracer method also eliminates the tedium of chemical processes, he pointed out.

R. L. Brett, West Disinfecting Co., Long Island City, N. Y., followed Dr. Dahm with a report on fogging test methods developed for evaluating insecticides made by his company for roach control. The project was started, he explained, because it was felt that there was a definite need for a method to be followed under simulated conditions as closely comparable as possible to those existing in most food plants. He described the test chamber which was built, with controlled heat and humidity, and detailed the procedure followed in evaluating West products for control of adult male German roaches.

Waxing Vinyl Floors

THE "Effect of Floor Wax on Vinyl Floors" was reported in a paper of that title by Cyril S. Kimball, executive vice-president of Foster D. Snell, Inc., New York consulting and testing chemical and engineering firm.

Mr. Kimball's paper, which begins on page 147 of this issue, pointed out that:

1. The appearance of vinyl plastic tile, as judged by gloss measurement, is greatly improved by waxing.
2. The use of wax does not significantly change the coefficient of friction or slip properties of the product.
3. The soiling tendencies of vinyl tile may be substantially decreased by waxing.
4. Soil removal by scrubbing is greatly facilitated where vinyl tile has been waxed.
5. Wax gives pronounced protection against marring of vinyl tile surfaces.
6. The application of water emulsion wax to certain tiles when they are new may prove difficult because of poor wetting and spreading. However, after the flooring has been subjected to a period of service this condition disappears.

In discussing the "Relation of Laboratory Tests to Practical Field Results," J. J. Crawford of the General Services Administration, New York, pointed out that he is convinced that the only satisfactory method of purchasing water emulsion wax is on a performance specification basis. Gloss relationship between field and laboratory tests is not good, Mr. Crawford stated. He pointed out that waxes showing low gloss in a laboratory test are considerably improved by buffing. Other waxes that are good in the laboratory sometimes do not show up well on the floor, he stated.

Test methods show promise, but further work must be continued to bring laboratory and field tests more in line, Mr. Crawford concluded.

A motion by Frank J. Pollnow, Jr. of Vestal, Inc., St. Louis, that the C.S.M.A. present its findings on the effects of waxing vinyl flooring to manufacturers of this material in an effort to persuade them to discontinue claims that "vinyl flooring needs no waxing," was seconded and approved.

At an off-the-record discussion of proposed trade practice rules for the floor wax and floor polish industry, presided over by Bayard S. Johnson of Franklin Research Co., Philadelphia, a proposed functional definition of wax was voted down as unsatisfactory. The definition, as proposed by Joseph Green of Oil Specialties and Refining Co., Brooklyn, read:

"Any product, which after application to the floor and evaporation of the solvent or carrier, leaves a lustrous solid film either before or after polishing and manifesting wax-like characteristics of adhesion and cohesion, said film capable of being substantially removed by ordinary methods without deterioration of the surface to which it is applied under recommended conditions of usage."

At the same time the division voted that it is impossible to agree on a definition of the term wax that is suitable for use in the proposed trade practice rules for the floor wax industry. The division also voted to recommend to the F.T.C. elimination of the word "cleaning" in the disjunctive definition of the rules. If the word is left in, soap conceivably could be subject to the trade practice rules for the floor wax industry.

New Wax Specification

A NEW interim federal specification covering water emulsion, slip resistant floor wax, P-W-00151b (General Services Administration - Federal Supply Service) was discussed by J. B. Snider, Chief, Chemical, Drugs and Agricultural Products, Specifications Branch, Standards Division, F.S.S.-G.S.A. Effective June 15, 1953, the new specification, which is said to be based upon currently available technical information, has not been approved for promulgation as a regular Federal Specification. It is subject to modification, and pending its promulgation as a regular Federal Specification it is for optional use by all Federal agencies.

Among the principal provisions of the new performance type specification are the following:

1. Scope and Classification

1.1 Scope. — Slip-resistant water-emulsion floor wax covered by this specification is intended for use on asphalt tile, rubber tile, and linoleum and other floor surfaces. It should not be used on wooden floors unless the floor is properly sealed. The product is generally used without dilution. This product exhibits the optimum balance of all desirable wax properties, including slip-resistance and durability. The quality level is essentially based upon and controlled by standard samples (see 3.2). Slip-resistance of this product has been determined to be acceptable. Complete satisfaction from the product will be obtained with a possible exception on ramps and similar abnormal locations where the requirement for gaining additional slip-resistance may necessitate some sacrifice in durability (see 6.1).

1.2 Classification—Grade and concentrations. — Water-emulsion floor wax covered by this specification shall be one grade, and two concentrations:

(a) 12 percent solids, minimum
(b) 16 percent solids, minimum

2. Applicable Specifications

2.1 The following Federal specification, of the issue in effect on date of invitation for bids, forms a part of this specification:

P-S-598 — Soaps, Liquid and Paste (Automobile, Floor, and General Cleaning).

3. Requirements

3.1 Qualification. — Slip-resistant water-emulsion floor wax furnished under this specification shall be a product which meets the requirements in paragraphs 3.3 to 3.11 inclusive, the tests in paragraph 4.3, and shall be equal to or better than the standard sample (3.2) with respect to slip-resistance, durability, and general appearance as determined by actual floor tests. The samples offered for qualification by the manufacturers shall be from production batches of the same size used in producing wax in commercial quntities. Small pilot plant or experimental formulations will not be considered as complying (see 6.2).

3.2 Standard samples. — Tentative standard samples represent the quality acceptable for government use with respect particularly to slip-resistance, durability, and general appearance, and will serve as the reference standards for qualification and the examination of deliveries. These samples are available at $3.00 per gallon for 12 percent solids and $4.00 per gallon for 16 percent solids. Requests for samples accompanied by check or money order should be sent to Chief, Purchase Division, Federal Supply Service, General Services Administration, 250 Hudson Street, New York, N. Y.

3.3 Nonvolatile matter (total solids). —The nonvolatile content shall be not less than 12 percent concentration and 16 percent concentration (see 4.3.1).

3.4 pH range.—The pH range of the water emulsion floor wax shall be not greater than 10.0 (see 4.3.2).

3.5 Film characteristics. — The film produced by the product shall show no pronounced whiteness, shall have a smooth finish, and shall be clear and free from particles (see 4.3.3).

3.6 Sediment. — The amount of sediment present in the water-emulsion floor wax shall be not more than 0.1 percent by volume and shall be soft and free from grit (see 4.3.4).

3.7 Stability.—The product shall remain in the same fluid state as made, and shall show no creaming, gelling or separation for a period of nine (9) months when stored under normal conditions in original unopened containers. In addition the product shall meet the above stability requirement when tested in accordance with 4.3.5.

3.8 Removability.—The dried film on the test panel shall be completely removed after 75 oscillations when tested as specified in 4.3.6.

3.9 Water spotting.—The dried film shall show no separation from the surface of the test panel and only slight whitening after buffing (4.3.7).

3.10 Odor. — The product shall not have an offensive odor nor shall it develop an offensive odor upon storage in the original, unopened container.

3.11 Workmanship. — Products under this specification shall be produced by the application of skillful and modern techniques, utilizing the proper blending of high-grade materials with suitable and adequate manufacturing facilities to effectively control the optimum balance of all desirable wax properties, as defined herein.

4. Sampling, Inspection and Test Procedures

4.1 Sampling.

4.1.1 *For qualification.*—The inspector shall take six (6), 1 gallon cans of the product offered for qualifiction (se 3.1, 3.11). Each can shall be labeled as follows:

Name of the product and percentage of solids
Date of manufacture
Code number (to be entered by inspector)
"Keep from freezing." (Can and cartons.)

4.1.2 *For sampling of deliveries.* — Five (5), 1 gallon units taken from each of five containers (1's, 5's, or 55's) shall constitute the sample. Samples should be protected from any possibility of freezing.

4.2 Inspection of deliveries. — Inspection shall be made on predetermined cycles by the procuring agency or a duly authorized representative at the time and place designated by the procuring agency.

4.3 Tests. — (To be run on all samples.)

4.3.1 *Nonvolatile matter (total solids).* — Weigh to the nearest milligram approximately two grams of the sample, in duplicate, by using a weighing burette into tared, dried, flat bottom dishes of approximately six centimeters in diameter. Place in a forced draft drying oven and heat at 105°-110° C. for 16 hours. Cool, weigh, and calculate results. Duplicate samples shall check within 0.1 percent and the average shall be not less than concentration specified.

4.3.2 *pH value.* — Determine the pH value by means of a meter having glass electrodes previously calibrated with a standard buffer.

4.3.3 *Film characteristics.* — Take a clear piece of glass plate approximately 3 inches by 5 inches long of a thickness not more than ¼ inch. Pour 50 millimeters of the sample over the surface, which is supported at an angle of 45° to the horizontal. Allow the sample to drain and dry in a nearly vertical position at a temperature of 23° ± 1° C. and a relative humidity of 50 ± 4 percent. Observe the film for signs of whiteness and smoothness. Observe the film through the underside of the glass plate for clearness and particles.

4.3.4 *Sediment.* — Pour 100 milliliters of the well-mixed sample into a graduated ASTM water and sediment tube. Centrifuge at an equivalent centrifugal force of 1500 revolutions per minute, and a diameter swing (tip to tip of whirling tubes) of 16 inches for 30 minutes. Read the volume in the bottom of the tube.

Note: If the available centrifuge has a swing varying from that stated above, calculate the proper speed using the following formula, where D represents the diameter of swing:

$$\text{r.p.m.} = 1500 \sqrt{16/D}$$

4.3.5 *Stability — heat test.*—Pour 100 milliliters of sample into a 4 ounce clean, glass bottle (approximately 15 cm. high). Securely close the bottle and allow to stand undisturbed near the center of an oven maintained at 52° C. for 168 hours. Remove the sample, allow to cool to room temperature and test for compliance with 3.7.

4.3.6 *Removability.*

4.3.6.1 *Preparation of test panel.* — Prepare a new 6 x 6 inch TOTL[1] linoleum panel, rigidly mounted, by buffing carefully with number 00 oil-free steel wool to bring the gloss between 5 and 10; if the gloss exceeds 10, discard the panel[2]. Using a Mohr pipette, drop 0.4 milliliter of the sample on the prepared linoleum panel which has been carefully leveled.

[1] TOTL linoleum panels can be obtained from the Chemical Specialties Manufacturers Association, 110 E. 42nd St., New York, N. Y.

[2] A suitable instrument is the 60° Gloss Meter, Gardner Laboratory or its equivalent.

Picture Captions

Top row, l. to r.: Milton Blank, Trio Chemical Works, Inc., Brooklyn; Gerard De Napoli, Masury-Young Co., Boston; Bayard Johnson, Franklin Research Co., Philadelphia. Carleton Shelburne, Stanley Home Products Co., Easthampton, Mass.; George W. Fiero, Esso Standard Oil Co., New York; Josephus W. Dolson, Hercules Powder Co., Wilmington, Del., and Harold Snider, E. I. du Pont de Nemours & Co., Wilmington, Del. R. C. Clark, Semet Solvay, Chicago; Frank J. Pollnow, Jr., Vestal, Inc., St. Louis; A. E. Budner, S. C. Johnson & Son Co., Racine, Wisc., and Axel Sodergreen, West Disinfecting Co., Long Island City, N. Y.

Second row: Herbert Mellan, Durez Plastics & Chemicals, Inc., N. Tonawanda, N. Y.; George Long, W. C. Hardesty Co., New York, and Irving Gaines, Onyx Oil & Chemicals Co., Jersey City, N. J. Ralph Dysart, S. B. Penick & Co., New York; J. J. Gregory, Chase Products Co., Maywood, Ill., Ted Dell and Frank Seeland, S. B. Penick & Co., New York. Carl Pacifico, Wyandotte Chemicals Corp., Wyandotte, Mich., and I. Seliz, Emulsol Corp., Chicago.

Bottom row: Guy E. Reed, executive vice-president, Harris Trust and Savings Bank, Chicago, Tuesday, May 19, luncheon speaker, with C. L. Weirich. Gerald F. Hower, Hillyard Chemical Co., St. Joseph, Mo.; Don McSorley, Kinetic Chemicals Div., E. I. du Pont de Nemours & Co., Wilmington, and H. H. Lawson, Federal Varnish Div., Chicago. Mrs. E. D. Sullivan, executive secretary, C.S.M.A., H. W. Hamilton, C.S.M.A. secretary, and W. S. Jessop, U. S. Sanitary Specialties Co., Chicago.

Touch the center of the sharp edge of a 2-inch wide doctor blade applicator having .008 inch clearance to the emulsion. Move the applicator from side to side so that the emulsion covers the entire sharp edge. With the applicator held vertically, spread the emulsion rapidly over a length of 4 inches by moving the applicator back and forth to produce a uniform coat 2 inches by 4 inches, removing the applicator at the center of a stroke. Allow the resultant film to dry 24 hours at 23° ± 1° C. and 50 ± 4 percent relative humidity in still air.

4.3.6.2 *Apparatus.*[5]

4.3.6.2.1 *Brush.* — The brush block shall be an aluminum block, 3½ inches by 1½ inches by ½ inch with 60 holes in the block, each ⅛ inch in diameter. The holes shall be solidly filled with stiff, black, butt-cut, Chinese-hog bristle. The bristles shall extend ¾ inch beyond the block and the abrading surface shall be as nearly plane as possible. Symmetrically placed weights shall be added to the brush-box assembly to bring the total weight to one pound.

4.3.6.2.2 *Washability apparatus.*—The apparatus shall consist essentially of an electric motor mounted on a flat metal plate and a mechanism through which the motor can impart a reciprocating motion to the brush-box assembly across the test panel clamped to the plate. The power shall be transmitted from the motor to a driving arm by means of a belt, pulley, and gear-reduction box. A flexible wire shall be attached from the driving arm to each end of the brush-box assembly through adjustable springs and shall be guided by a pulley on each side of the plate. The tension on the wire shall be just sufficient to take up any slack. The path of travel of the brush shall be approximately 15 inches and the speed of the brush shall be approximately 37 oscillations per minute.

4.3.6.3 *Procedure.* — Place the TOTL panel on the plate of the washability apparatus in such a manner that the brush will travel at right angles approximately through the center of the dried film on the panel. Place a clean panel on each side of the test panel to provide a surface on which the brush travels and to prevent the test panel from moving with the brush. Soak the brush in 2 percent aqueous solution of neutral potassium oleate soap conforming to Federal Specification P-S-598, type II, to which 5 milliliters of 28 percent NH_4OH is added per 1000 milliliters of soap solution. Stop the motor after 75 oscillations and remove the panel. Blot off the excess soap solutions by means of a clean, dry, absorbent cloth and then examine for complete removal. Any evidence of the presence of wax film remaining shall not be considered complete removal, disregarding hair lines due to skipping of bristles.

4.3.7 *Water spotting.* — Apply two *thin* coats of sample wax with a swab on a new TOTL panel, rigidly mounted and buffed as in 4.3.6.1. Allow first coat to dry for 24 hours at 23° ± 1° C. and 50 ± 4 percent relative humidity. Carefully apply the second coat using as little pressure as possible, allow to dry two hours, buff well with lamb's wool, either manually or by machine, and continue drying for an additional 22 hours under the same conditions. Place 1 milliliter of distilled water on the panel and allow to stand undisturbed for 1 hour at the above standard conditions. Lightly wipe the water off with a soft, dry cloth. Buff as above and examine for compliance with 3.9.

5. Preparation for Delivery

5.1 Packaging. — Unless otherwise specified, commercial packages are acceptable under this specification.

5.2 Packing. — The commodity shall be prepared for shipment to permit acceptance by carrier for transportation at the lowest applicable rate, and to afford maximum protection from normal hazards of transportation.

5.3 Marking.

5.3.1 *Issue packages.* — Each package shall be marked with the name of the commodity, the name of the contractor, and detailed directions for the use and maintenance.

5.3.2 *Shipping containers.* — Unless otherwise specified, shipping containers shall be marked with the name of the commodity and the quantity contained therein as defined by the contract or order under which the shipment is made, the name of the contractor, and the number of the contract or order.

5.3.3 *Freezing precaution.*—The label of the issue packages and shipping containers shall bear a plain and conspicuous legend:

Keep from Freezing

so as to insure the shipment and handling of the product in an unfrozen state.

6. Notes

6.1 To obtain the performance which this product can give, reasonable care should be exercised in its use:

(a) Stripping.—Old wax should be removed completely and the floors rinsed with clear water to remove all traces of detergent or cleaner. Likewise the factory finish on new floors should be completely removed. Gloss meter readings of no higher than 10 are an indication of fairly good cleaning.

(b) Application.—It is recommended that two coats be applied to new or old stripped floors, each followed by buffing after thorough drying. The wax should be spread evenly and thinly at the rate of about 1500 square feet or more per gallon.

(c) Maintenance.—For effective performance of wax, floors should be dry brushed or (vacuumed) daily and damp mopped followed by buffing weekly, oftener, however, under heavy traffic conditions.

6.2 In the procurement of products requiring qualification, the right is reserved to reject bids on products that have not been subjected to the required tests and found satisfactory for inclusion on the Federal Qualified Products List. The attention of suppliers is called to this requirement, and manufacturers are urged to communicate with the General Services Administration, Washington 25, D. C., and arrange to have the products that they propose to offer to the Government tested for qualification in order that they may be eligible to be awarded contracts or orders for the products covered by this specification.

6.3 Purchasers should exercise any desired options offered herein.

[5] The brush and washability apparatus may be obtained from the Henry A. Gardner Laboratory, Inc., 4723 Elm Street, Bethesda, Maryland.

General Session, May 19

TUESDAY morning's general session heard reports by CSMA officers, including H. W. Hamilton, secretary, Clarence L. Weirich, president, and P. C. Reilly, treasurer.

Mr. Hamilton dwelt on the work of the precautionary labeling committee which, he said, is intensively striving to get the proposed instructions in workable form, "so that when they are adopted, we'll be able to live with them." More bulletins were issued during the past year than when controls were in full swing, Mr. Hamilton said. He told, also, of the cooperation being given other associations on matters of common interest. Mr. Hamilton reminded members that C.S.M.A.'s legal counsel, John D. Conner, works only on organization interests and cannot provide legal advice on members' private business problems through the association.

Mr. Weirich spoke briefly on association services dealing with regulatory agencies. He asked, in particular, for wholehearted support of the precautionary label committee.

Mr. Reilly reported that 634 persons had registered for the meeting up through the preceding evening, making this the largest attendance at any midyear meeting of CSMA. The association stayed within its budget last year, he said, and now, with expenses going up, it was becoming quite a struggle to repeat that record. He was confident, however, that this can be done.

An unscheduled speaker, H. L. Bernstein, of the New York City fire department's Bureau of Fire Prevention, outlined changes in New York's label regulations affecting color, size of type, location of warning, etc.

A resolution submitted by Dr. James A. Green, chairman, insecticide division, was then adopted, extending CSMA's sympathy to relatives and associates of C. R. Cleveland, chief entomologist of Standard Oil Co. (Ind.), who died May 14.

E. M. Hughes of R. M. Hol-

lingshead Corp., Camden, N. J., in a paper entitled "Safety Sam—The Consumer's Man," spoke of the need for arousing consumer interest in safe handling of hazardous household chemicals.

"Our business," he said, "is on the threshold of tremendous expansion. Our products are made by trained chemists but used by untrained consumers. Sooner or later we must begin educating the users on how to use our products safely. We've got to get away from stilted expressions now common on our labels."

He suggested use of a folksy, cartoon-type figure, which he called "Safety Sam," on precautionary labels, as a means for creating consumer interest in safety that is needed. This is "negative selling," he pointed out, but the finest kind of public relations.

Fine points of the federal patent laws were explained by Albert I. Kegan, professor of patent law at Northwestern University's law school. Of more interest to the gathering, however, was his fascinating account, with pictures, of some of the weird inventions he has come upon in his search through patent office records.

Interstate Commerce Commission regulations affecting shipment of flammable liquids, compressed gases and flammable compressed gases were explained by Dr. W. G. McKenna of the Association of American Railroads' Bureau of Explosives, South Amboy, N. J. The ICC, he stressed, is interested only in the information manufacturers must place on the outside of the shipping container where railroad employees can see it. The AAR, he said, has a corps of field men ready to advise shippers on problems. Advice and a reasonable amount of testing are available for the asking and without charge, he said.

CSMA's general counsel, John D. Conner, of Washington, D. C., in a review of legislative trends affecting the industry, said that in the latest sessions of 44 legislatures, over 35,000 laws on every subject were introduced but only 5,335, or about 15 percent, were enacted. Better than 50 percent of the laws approved by CSMA were passed, he said, but the gross effect of the various legislative actions is not fully comprehended by the industry, according to Mr. Conner.

To an increasing extent, he went on, states are taking action which conflicts with CSMA's broad policies and are placing restraints on shipment of industry products. It is recognized, he said, that federal regulatory laws are sound and adequate and that there is room for supplementary state laws, with all of which the industry must comply.

It is the industry's duty, however, to put out sound products and inform users how to use them correctly. If this is done, Mr. Conner pointed out, manufacturers will be in a strong position to oppose encroachments on their constitutional rights to enjoy the privileges of interstate commerce. He promised that the Association will do all in its power to defend those rights.

Joint Wax-Automotive Div.

C. M. KNOWLES, Antara Chemicals Division, General Dyestuff Corp., New York, addressed a joint session of the Waxes and Floor Finishes and Automotive Divisions, the afternoon of May 19. His subject was the effect of 4-hydroxy benzophenone and dimethyloxy benzophenone on ultra violet light. His report indicated that these materials were useful in absorbing ultra violet light and in resisting disintegration. 4 hydroxy is a colorless product, while dimethyloxy has a slight color but is more effective, according to tests made by his firm. Dr. Knowles suggested that these benzophenones might be useful as absorbers in the manufacture of furniture lacquers and transparent shades, in aircraft glazing and in producing colored photographic prints. They were indicated as possible stabilizers in the manufacture of plastics, rubber based adhesives, and colored solutions such as lotions, creams, etc. Other possible applications are in coatings to protect paper, leather and textiles, in floor and furniture polishes and waxes, and in lacquers and sprays for store and auto windows.

Dr. W. K. Miller, S. C. Johnson & Son, Inc., Racine, Wis., discussed various methods currently in use for determining acid numbers of shellac. He reported that the wide variation in test procedures was resulting in an equally wide variation in results. His report detailed the results from numerous tests on the same samples of shellac, using various solvents and titrants, both with and without the application of heat. In conclusion, his committee recommended a standard testing procedure. Dr. Miller's paper will appear in the July, 1953 issue of *Soap and Sanitary Chemicals*.

A. R. Jackson, Allen B. Wrisley Co., Chicago, in charge of quality control at that soap factory, reported on the procedures in use at the Wrisley plant to insure more uniformity in finished products. As an illustration he discussed one problem which involved a variation in soap content in a certain built soap product. He first had a special 3000 pound batch made up for the special use of his department. When samples from regular batches were subsequently tested, a sample from the special batch was tested along with each sample from current production. These tests indicated that 20% of the variation was due to the laboratory with the remaining 80% chargeable against the factory. By introducing new testing and manufacturing techniques the variation was progressively reduced to an absolute minimum. Mr. Jackson then gave a detailed explanation of the inspecting and receiving procedure at Wrisleys.

Label symbol and caution statement of R. M. Hollingshead Corp., Camden, N. J.

Safety Sam Says :
CONTAINS CARBON TETRACHLORIDE. DANGER! HAZARDOUS VAPOR AND LIQUID. MAY BE FATAL IF INHALED OR SWALLOWED. DO NOT TAKE INTERNALLY; DO NOT BREATHE VAPOR. USE ONLY WITH ADEQUATE VENTILATION. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN.

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LIQUID SOAPS

PARA BLOCKS

POLISHES

SCOURING POWDERS

SHAMPOOS

TOILET SOAPS

ETC.

Slides depicting the various forms in use in the receiving and inspection department showed how everything coming into the plant was thoroughly checked to insure that sub-standard raw materials and off-grade supplies of other kinds would not enter into the production line.

The last speaker at the joint session May 19, of the Waxes & Floor Finishes and Automotive Divisions was C. T. O'Connor, Shanco Plastics & Chemicals, Inc., Tonawanda, N. Y. Mr. O'Connor, who is one of the pioneers in the development of synthetic resins for wax and polish formulations, sketched briefly the history of synthetic resins in products of this type. He pointed out that resins were first used in an appreciable volume in these products over ten years ago when the supply of vegetable waxes first felt the stress of World War II. The substitutes soon proved to have many advantages for wax and polish formulations and consequently there has been a gradual conversion to synthetic materials just as there has been in many other products in the chemical industry.

The use of resins in wax and polish formulations has shown continual gains and currently the solids content of many products now runs at least 50% synthetic resins. Mr. O'Connor reviewed resins that are being used in the formulation of waxes and polishes and pointed out the specific advantages of each one. He also called attention to the possibilities of several new resins that will soon be available for the field. Mr. O'Connor stressed that it is frequently necessary to change the type of resin when changes are made in the percentages of other solids in the formula such as micro-crystalline waxes, shellac, vegetable waxes, etc. and warned that producers may wind up with an unbalanced formula unless close attention is paid to their resin requirements whenever a product is reformulated. Mr. O'Connor also reminded his audience that synthetic resins can be tailor-made to give formulations whatever qualities are of major interest to each formulator whether their major concern is in the degree of gloss, water resistance, toughness, etc., but pointed out that it is usually best to strive for a correct balance of the important properties. Mr. O'Connor also described a "waxless" wax consisting of 95 percent resin and five percent "Geon" latex.

Disinfectant Session

A PANEL discussion on registration and re-registration of disinfectant and sanitizer labels was the feature of the second Disinfectant and Sanitizer Division meeting the afternoon of May 19. Dr. L. S. Stuart of the USDA, Washington, D. C., announced that the department does not anticipate any drastic changes in requirements for re-registration. The procedure will be kept as simple as possible, he promised. Changes will be requested where they appear to be justified to bring the labels up to date in conformity with the law. He emphasized that names used which imply characteristics not justified by the product involved will not be acceptable. He also elaborated on details of the law dealing with such matters as the position of the ingredient statement on the label, what the directions for use should specify and what evidence must be submitted to substantiate claims. Some few minor changes in the law may seem advisable, he stated.

Speaking from the manufacturer's viewpoint on federal and state regulation of labels, W. A. Hadfield, Pennsylvania Salt Mfg. Co., Philadelphia, said it should be recognized that, since the use of products for destroying bacteria is involved, the law falls within the government's powers for safeguarding public health. He discussed H.R. 620, now before Congress, to amend the ingredients statement requirements, which is being supported by CSMA. At present, he said, 23 states have laws patterned after the federal act and 16 others have laws establishing jurisdiction over labels but not modeled on the federal statute. The other nine states have no regulatory laws and take no action on labels, he said.

John D. Conner, CSMA's general counsel, found that his assigned subject, "Present and Proposed Regulations Regarding Registration of Disinfectant and Sanitizer Labels" had been covered by the two preceding speakers, so he devoted his talk to explanation of a number of legal cases involving labels which have been before the courts in various states recently.

One recent decision by the Virginia Supreme Court of Appeals, he related, fixed liability on the manufacturer of a fungicide for apple scab, because the label did not include an adequate warning and caution. In a California case, involving explosion of an insecticide the jury found for the plaintiff because, although the label warned "Do not store in excess heat," it was felt that more words should have been added explaining that this "Might result in an explosion."

"You cannot assume," said Mr. Conner, "that if your label can get by the regulatory agency, your responsibility ends. Don't rely on the directions for use statement to avoid a warning or caution statement. If you can foresee any possible injury put something on the label to warn against it."

He also discussed disclaimer statements and cases which have arisen under expressed or implied warranty principles. There is no law, he warned, under which negligence can be disclaimed. Court decisions involving negligence are conflicting but there is a strong tendency in the courts to disallow the validity of disclaimers, so far as negligence is concerned. In a number of cases, however, he stated, disclaimer statements have served a beneficial purpose.

Dr. R. C. Sherwood, chairman of the section's scientific committee, reported briefly on the status of various projects under investigation by sub committees. None of these is complete, but it is hoped to have final reports for the Association's December meeting, he said.

Spray Drying

FOLLOWING a discussion of "The Influence of Accumulated Soil on the Bacterial Population of Milking Machines" and another dealing with the "Evaluation of Sea-Water Laundry Detergents by Standard Soil Cloths," the spray drying of

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The New Tornado Floor Machine is the finest precision scrubbing and polishing machine you can use.

It is the product of years of research, careful design and months of painstaking development and testing by a skilled staff of experienced cleaning equipment engineers.

The efficient operation of Tornado will reduce maintenance time on your floors—improve appearance and add years to their useful life.

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detergents was reported on by A. E. Sharphouse of Ultra Chemical Works, Inc., Paterson, N. J. In his paper, Mr. Sharphouse pointed out that the bulk of the spray dried detergent products are produced for household consumption. Spray drying is used to produce a bead form detergent, the speaker said.

The papers on the influence of soil was presented by W. L. Mallman of Michigan State College, East Lansing, Mich., and was prepared by him, Don Muentener and Frank Peabody.

Harry Sosson and Rubin Bernstein of the Industrial Test Laboratory of the Philadelphia Navy Yard co-authored the paper on evaluation of sea water laundry detergents which was read by Mr. Sosson.

The other paper presented at the session, that dealing with "Foam Stabilization by Alkylolamides" by Herbert L. Sanders and E. A. Knaggs of Ninol Laboratories, Inc., Chicago, appears beginning on page 45 of this issue.

Aerosols for Women

AEROSOLS to dispense products for women should be designed with that in mind, Miss Helen Wells, women's editor feature department, Chicago *Sun-Times* told the Aerosol Division meeting the afternoon of May 19. Larger aerosol containers with tricky or difficult to operate valves should be avoided in packaging aerosols for women, Miss Wells said. Her comments of pressure propelled products were based on her own personal experiences with them, she said. Package styling should be consonant with the woman's desire for an attractive, simply operated dispenser.

"Psychological Properties of Deodorizing Materials" by Dr. Dean Foster, director of laboratories, U. S. Testing Laboratories, Hoboken, N. J. and a paper on packaging of aerosols for the cosmetic industry by Gilbert Snyder of the New York firm bearing his name, concluded the session.

Insecticide Division

FEATURES of the Insecticide Division meeting the afternoon of May 19 included a paper of the role of sanitation in fly control on dairy farms and a symposium on toxicity of insecticide ingredients.

In his paper, "Sanitation Management in Fly Control," Robert J. Dicke, University of Wisconsin, Madison, pointed out that:

> The fly control failures that have occurred in many dairy areas during the past two years have been attributed to ineffective insecticides. Resistance in flies has been demonstrated and is usually given as the principal reason for insecticide failure. However, within the limitations of the speaker's field experiments, resistance was not a satisfactory explanation for ineffective control, while an overwhelming fly breeding potential appeared to be a more logical control fault than insecticide failure. These experiments indicated the following:
>
> 1. Resistance of field collected flies to specific insecticides was inconsistent and not a satisfactory explanation for fly control failures.
> 2. Satisfactory fly control was obtained on most farms where a program of reasonable sanitation management and insecticide control was employed.
> 3. Effective control was not obtained on farms where excessive fly breeding occurred, and control depended upon insecticides only.

The first speaker of the symposium on toxicity, Dr. Wayland J. Hayes of the U. S. Public Health Service, Savannah, Ga., after discussing the effects of various insecticide toxicants and solvents, pointed out that while the safety record of household insecticides is good, the question is whether the association and the industry will let the matter rest or improve the record. Because the industry's safety record is good doesn't mean it could not be better, Dr. Hayes said.

Justus C. Ward of the Production and Marketing Division of the U.S.D.A. in discussing "Labelling" of insecticides pointed out that labelling is not static. Research findings may make it necessary to modify our concepts of acceptable use, he said. Sometimes it is necessary to withdraw products that are found to be too toxic, he stated. At other times it may be necsary to add more information to the precautionary section of a label. Mr. Ward also pointed out that the instructions on the use of a product are sometimes just as important as the precautions on the label. It is necessary to know when it is safe to use a material and when not to use it. Consumers must be convinced that labels are factual, reasonable and should be followed, Dr. Ward stated. He urged manufacturers to follow the spirit of the law and not just the letter, and to tell distributors of the importance of labels.

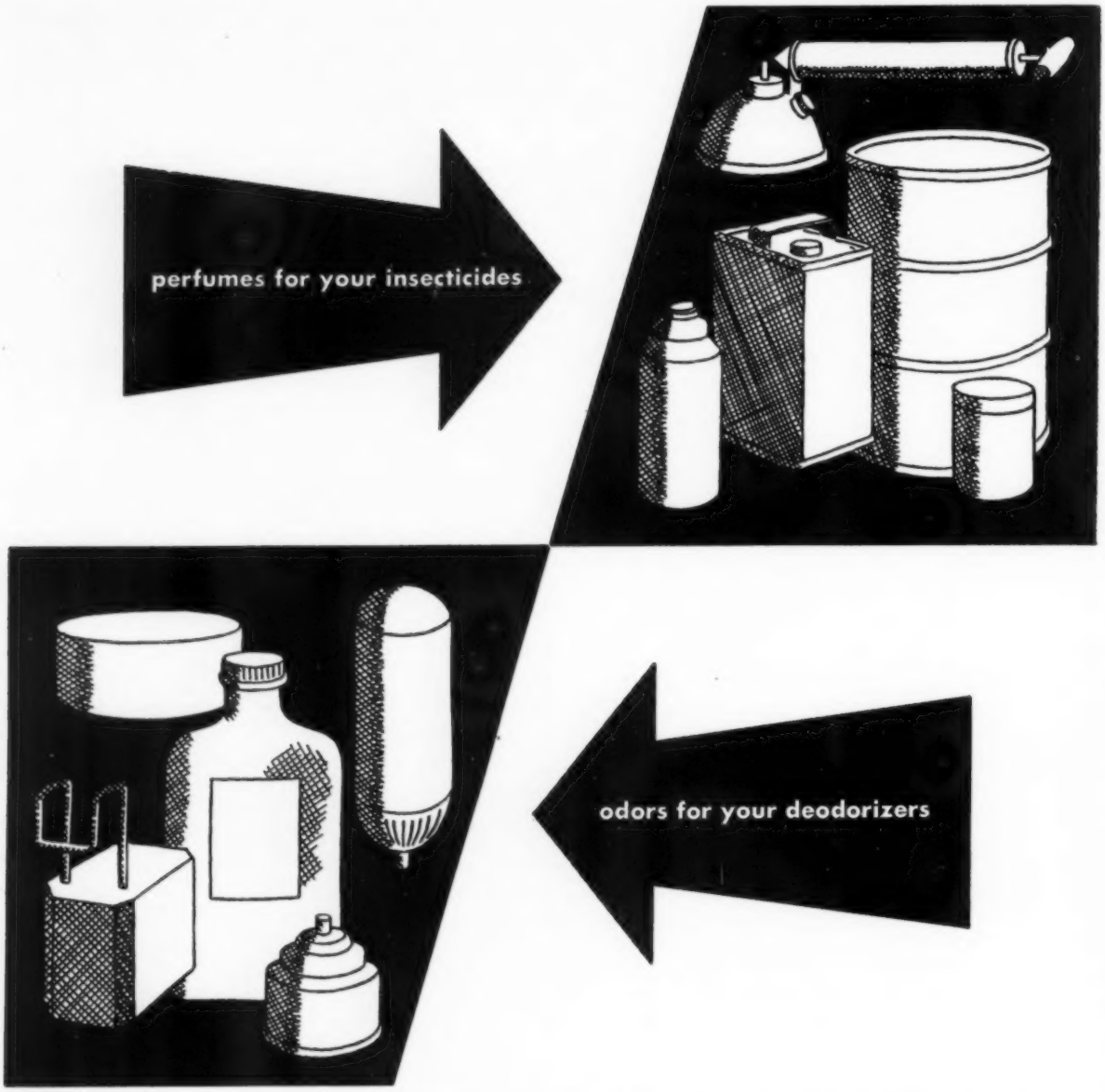
The toxicity of the new insecticide "Strobane" was outlined as follows by Dr. Herman A. Shelanski of Industrial Toxicology Laboratories, Philadelphia:

Acute oral toxicity studies indicate that "Strobane" in dosages over 75 mgm/kg. of body weight in single dosages is toxic. However, "Strobane" in concentrations up to 500 ppm fed in the diet, may be considered nontoxic on chronic ingestion. This is typical of chlorinated terpenes, where small quantities may be toxic in single doses but smaller quantities approaching the LD-O may be fed chronically over considerable periods of time. This indicates that the material is not cumulative in its action.

"Strobane" may be used safely in contact with the skin in small quantities of 1 cc/kg. and 2 cc/kg. of a one percent solution in white oil repeatedly. However, the same dosages in white oil or other solvents of a five percent solution of "Strobane" produces typical clonic convulsions on repeated application.

Chronic exposures to aerosols containing five percent "Strobane" can be used over a considerable period of time in concentrations far beyond that which would be encountered in normal usages. Therefore, "Strobane" may be used safely in the concentrations reported above for uses recommended by the manufacturers.

The toxicity of piperonyl butoxide was discussed by the final speaker of the panel, W. E. Dove of U. S. Industrial Chemicals, Inc., Baltimore. The acute toxicity of piperonyl butoxide is of a low order, Dr. Dove stated. He pointed out that it is fatal to rats and rabbits only when fed in large doses by tube to the stomach. According to Lehman the material has an MLD of 12,800 ml per kilogram of body weight. Piperonyl butoxide is a member of the inherently safe methylenedioxyphenyl group and its degree of safety and synergistic efficiency with pyrethrum has led to its extensive use about foods, animals and homes, according to Dr. Dove.



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Waxing Vinyl Floors

By Cyril S. Kimball*
Foster D. Snell, Inc., New York

THE properties, usefulness, rise in popularity and public acceptance of vinyl flooring are well known. Shortly after the end of World War II, the commercial production of vinyl flooring began. For a number of good reasons the so-called plastic flooring has caught on and during the past two years there has been a rush by manufacturers to get into the field.

The different types of vinyl plastic floor coverings being produced include:

1. *Rotogravure printed yard goods.* This type of floor covering is the counterpart of the old familiar felt base printed floor covering. It is made by printing a photographed design with vinyl ink on a heavy paper which in turn is waterproofed, laminated to an asphalt saturated felt base, and finally covered with a transparent layer of vinyl plastic. The basic principle is similar to that used in the manufacture of "Formica." The commercial product sold under the brand name of "Sandran" is representative of this type of vinyl flooring.

2. *Calendered vinyl flooring.* In this type of plastic flooring, which can be said to be the counterpart of conventional inlaid linoleum, the oxidized drying oils or linoxyn is replaced by vinyl resin and plasticizer. Calendered vinyl flooring is produced in both tile and yard goods form. "Gold Seal Vinylflor" is a popular brand of this type of flooring.

3. *Semi-rigid vinyl base tile.* This type is comparable to asphalt tile except that vinyl type resins replace the asphalt, coumarone-indene or other cheaper resins commonly employed in asphalt tile. As with asphalt tile, asbestos, clay and/or other inert fillers are used together with coloring pigments. Semi-rigid vinyl tile is generally more flexible and more resilient than asphalt tile. Popular brands of this flooring are called "Terraflex" and "Koroseal."

4. *Flexible vinyl tile.* In this category we have a tile similar to but perhaps not quite the counterpart of rubber tile. Because this type does not contain as much filler, usually a minimum of asbestos fiber if any, and a lower loading of inert pigment and extender filler, it has a high gloss and resembles rubber tile in appearance. "Wingfoot" and "Lifetime Vinyl" represent popular brands of this type of vinyl flooring. Some manufacturers are laminating flexible vinyl type material to a backing material.

5. *Vinyl print yard goods.* This type of floor covering is very similar to conventional felt base linoleum except that the enamel used for printing the surface is made of vinyl resin. "Vinoflor" is a brand of such flooring which is available only as yard goods.

Superiority Claims

NOW what are the points of superiority claimed for vinyl flooring? Immediately we think of gloss, brighter colors, wear resistance, ease of maintenance, resistance to acids, alkalis, grease and oil and indentation resistance. In some cases at least, flexibility, dimensional stability and fire resistance are also emphasized. Manufacturers of floor wax are not too much concerned about the above claims, but there is one more claim, which seems to be more prominently emphasized to the homeowner than all the rest, namely the claim that vinyl flooring "needs no waxing." This representation is of concern to all manufacturers of floor wax. For this reason we were commissioned to determine the facts and report them to you.

I must say that I am not certain as to the connotation of the phrase "needs no waxing." I wonder if the manufacturers intend it to be understood that there is no urgent exigency for the use of wax, or that it is useless to use floor wax, that is, there is no condition under which floor wax applied to the surface will be of benefit. They cannot mean that the use of floor wax is harmful else the language would be different. Perhaps we can form a better conclusion as to what this phrase means by studying the facts disclosed thus far in our investigation.

If we consider the various attributes expected from the use of a floor wax, probably the first which comes to mind is to improve appearance. The word appearance comprises a number of factors, chief among which is the property referred to as gloss. The question of whether or not the use of floor wax on vinyl tile improves its gloss was investigated in our laboratory by applying three different types of waxes, all leading commercial brands, to five different types of nationally advertised vinyl tile. The types of wax and tile used in this connection were also used in all other phases of this investigation as discussed hereafter. Specifically the three types of waxes used were a conventional high wax content self-polishing product, a high resin content self-polishing wax, and a liquid solvent cleaner type of buffing wax. The method used for evaluating gloss is the standard method used by our own and many other laboratories.

Gloss

GLOSS was determined by the Gardner 60° Glossmeter. Values were expressed as gloss units per mil as compared with a theoretically perfect mirror, the gloss of which would be 1000 mil. The vinyl tile panels used

* A report to the Waxes and Floor Finishes Division of the Chemical Specialties Manufacturers Assn., presented during its 39th mid-year meeting in Chicago May 18, 1953.

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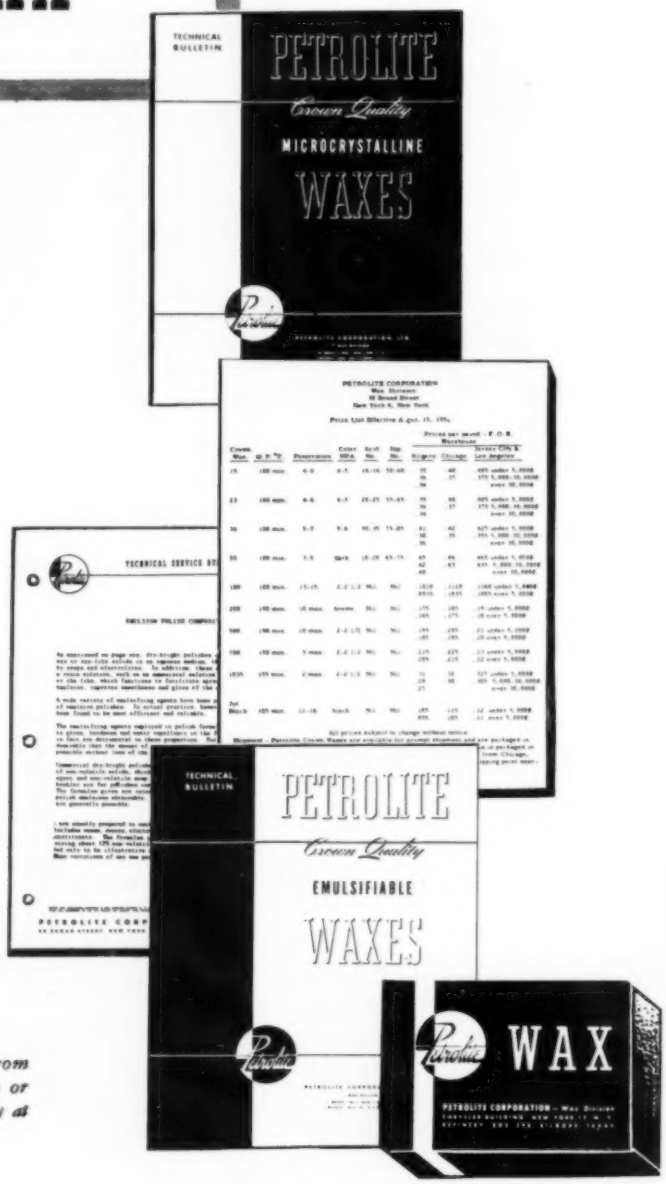

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in the test were 4″ x 8″ in size. These were scrubbed with ammoniacal soap and water and were permitted to dry after rinsing. The panels were then dipped in the wax to a depth of 4″, immersion was maintained for 10 seconds, after which the panels were permitted to drain in a vertical position for an additional 10 seconds. The clinging bead of wax at the bottom of the panel was then wiped off and the panels were laid in a horizontal position to dry under standard temperature and humidity. At the end of four hours, the gloss of the waxed and unwaxed portions of each panel was measured.

In the case of the buffing type wax, the wax was buffed after drying and before gloss measurement.

Table 1 shows the gloss values obtained for the waxed and unwaxed vinyl tiles. Inspection of the data shows conclusively that the gloss of the tiles is tremendously improved as a result of waxing and that without waxing several of the types of tile investigated are quite dull in appearance.

Leveling

ANOTHER of the factors connected with the use of floor wax on vinyl flooring is the question of whether or not a smoothly leveled film can be obtained. To investigate this problem, wax was applied to thoroughly cleaned panels in smooth overlapping strokes by means of absorbent cotton. The coated panels were left in a horizontal position until the wax dried and were then examined visually and rated for evidence of poor wetting and for relative freedom from streakiness. Table 2 shows the results of this evaluation. It appears that there are variations in behavior of waxes in these respects for various makes of tiles. It is our understanding that where this difficulty occurs, it is due to the type of mold release agent used in the manufacture of the tiles. Nevertheless, of the various types of tile studied here, only two, "Gold Seal Vinyl" and "Corlon," appear troublesome initially. Experience has shown, however, that even in the case of brands on which leveling is poor, this deficiency rapidly disappears in actual floor service of the tile. We have noted this to be the case on a vinyl floor installation in our own building and also in connection with a floor service test we have been carrying out using "Gold Seal Vinyl Tile."

Slip resistance

THE attractiveness of the advertising claim that vinyl tile does not need waxing may in the minds of some reside in the belief that floor waxes make floors slippery and therefore a vinyl floor which allegedly needs no waxing should be less hazardous than if waxed.

To arrive at the facts, the slip resistance of unwaxed tiles and tiles waxed with two coats of each wax were determined by means of both the methods for measuring slip resistance which have gained greatest acceptance. We have used the impact pendulum tester devised by Percy A. Sigler of the National Bureau of Standards, by means of which the coefficient of dynamic friction is determined. We have also used the James Machine, the apparatus used by Underwriters' Laboratories by means of which the coefficient of static friction of walkaway surfaces is determined.

Table 3 shows the values obtained. Note that for the Sigler method there is little difference indeed between waxed and unwaxed tiles. Some of the values for waxed tiles are slightly higher than values obtained for corresponding unwaxed tiles, others slightly lower. In almost all instances these differences are within experimental error so that we may conclude that so far as this test method is concerned, properly formulated waxes do not increase the slipperiness of vinyl tile.

By the James Machine we find much the same situation with the exception that values appear to be dispersed over a wider range both for the waxed and unwaxed tiles. In no case does a waxed tile show a slip resistance value lower than the corresponding unwaxed tile by a significant amount. On the other hand, in certain instances there appears to be an actual increase in slip resistance due to waxing.

Table 1. Gloss Per Mil. 60° Gardner Glossmeter

Brand of Flooring	Type of Floor Wax	No Wax	Waxed
Koroseal	a.	8	36
	b.	11	40
	c.	11	39
Wingfoot (old, unburnished)	a.	3	23
	b.	3.5	35
	c.	3	30
Wingfoot (new, pre-polished)	a.	18.5	47
	b.	18.5	50.5
	c.	19	40
Gold Seal Vinyl Inlaid Tile	a.	6	18
	b.	6	17
	c.	6	17.5
Corlon	a.	7	38
	b.	7	41
	c.	7	31
Lifetime Vinyl Floor Tile	a.	62	92
	b.	61.5	96
	c.	60	82

a.—Conventional emulsion type floor wax.
b.—High resin content emulsion type floor wax.
c.—Liquid solvent cleaner type floor wax.

Table 2. Wetting, Leveling and Spreading of Floor Waxes on Vinyl Flooring after Washing

Brand of Flooring	Type of Floor Wax	Wetting	Leveling and Spreading
Koroseal	a.	Good	Good
	b.	Excellent	Excellent
	c.	Good	Good
Wingfoot (old, unburnished)	a.	Fair	Good
	b.	Good	Good
	c.	Good	Good
Wingfoot (new, pre-polished)	a.	Excellent	Excellent
	b.	Excellent	Excellent
	c.	Good	Good
Gold Seal Vinyl Inlaid Tile	a.	Poor	Fair
	b.	Poor	Fair
	c.	Good	Good
Corlon	a.	Fair	Good
	b.	Fair	Good
	c.	Good	Good
Lifetime Vinyl Floor Tile	a.	Good	Fair
	b.	Excellent	Excellent
	c.	Good	Good

a.—Conventional emulsion type floor wax.
b.—High resin content emulsion type floor wax.
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Table 3. Slip Resistance—Coefficient of Friction

Brand of Flooring	Type of Floor Wax	Sigler		James	
		No Wax	Waxed	No Wax	Waxed
Koroseal	a.	.47	.44	.78	.85
	b.		.48		.78
	c.		.45		.84
Wingfoot (old, unburnished)	a.	.47	.48	.73	.72
	b.		.46		.72
	c.		.45		.70
Wingfoot (new, pre-polished)	a.	.48	.48	.61	.66
	b.		.50		.62
	c.		.45		.73
Gold Seal Vinyl Inlaid Tile	a.	.43	.49	.59	.63
	b.		.49		.57
	c.		.43		.56
Corlon	a.	.46	.52	.63	.66
	b.		.52		.65
	c.		.46		.68
Lifetime Vinyl Floor Tile	a.	.44	.48	.65	.86
	b.		.50		.66
	c.		.42		.83

a.—Conventional emulsion type floor wax.
b.—High resin content emulsion type floor wax.
c.—Liquid solvent cleaner type floor wax.

Table 4. Soiling Tendency—Maintenance Properties

Brand of Flooring	Type of Floor Wax	Before Soiling		After Soiling	
		No Wax	Waxed	No Wax	Waxed
Koroseal	a.	51.0	51	16	16.3
	b.	51.0	51	16	26.5
	c.	51.0	52.5	16	14
Wingfoot (old, unburnished)	a.	40.5	40.5	9	9
	b.	40.5	39	9	24
	c.	40.5	38	9	10
Wingfoot (new, pre-polished)	a.	38.5	36.5	9.5	13.5
	b.	38.5	40	9.5	23
	c.	38.5	39.0	9.5	8.5
Gold Seal Vinyl Inlaid Tile	a.	57	53	13.5	13
	b.	57	53	13.5	16.5
	c.	57	53	13.5	13
Corlon	a.	45	41	13	12
	b.	45	41	13	17.5
	c.	45	42	13	14
Lifetime Vinyl Floor Tile	a.	71	72	13	14
	b.	71	72	13	24
	c.	71	72	13	13

a.—Conventional emulsion type floor wax.
b.—High resin content emulsion type floor wax.
c.—Liquid solvent cleaner type floor wax.

Here, too, we may conclude that the James Machine also shows that slipperiness is not inherent in floor waxes when applied to vinyl tile.

Maintenance

THE next question studied was how the use of wax on vinyl tile affects the extent to which such tiles become soiled and what the relative ease of soil removal would be for waxed tile versus unwaxed.

Soiling tendency

THE evaluation of soiling resistance was carried out by a machine method, the details of which are described in a paper published in *Soap and Sanitary Chemicals*, January, 1949, p. 127. Briefly the method used consists of dip coating two radially cut sections of vinyl tile. These are fastened to the bed of a machine designed to impress a standard soil on the waxed panels in a manner approximating the pressure and scuffing action of the human foot in walking. The soil used is pulverized coke, which was selected as having a desirable degree of grittiness and offers good color contrast on the tile surface. All loosely adhering soil was removed by wiping with a dry cloth. The panels soiled in this fashion are then measured for degree of soiling by determining reflectance using the Gardner Reflectometer. The higher the reflectance value obtained, the lower the soiling tendency of the coating or flooring.

Table 4 shows the results of these tests for waxed and unwaxed tiles. We find that in no case does the test show the waxed tile to retain soil to a greater extent than the unwaxed beyond the limits of experimental error. On the other hand in a number of instances, notably in the case of the high resin type of wax, there is a definite improvement in resistance to soiling over the unwaxed tile.

It is indicated, therefore, that while the waxes tested do not increase the tendency of tile to soil, depending on their nature and quality, they may actually improve the resistance to soiling, thereby reducing the frequency of floor scrubbing.

Restoration of brightness

OUR next concern was the question of whether or not and to what extent the use of wax on vinyl tile would ease the removal of soil as compared with unwaxed vinyl tile. To study this, waxed and unwaxed panels were soiled, wherever possible, to approximately equal reflectances by the method used in determining soiling resistance. These panels were then scrubbed with a solution containing two percent potash oleate soap and 0.5 percent of 28 percent ammonia. Scrubbing was carried out using the Gardner model 105 straight line washability apparatus. After increments of scrub cycles, the panels were rinsed with clean water, blotted and reflectance was measured. In this manner, the ease of cleaning was determined in terms of scrub cycles vs. restoration of brightness or whiteness as indicated by reflectance readings. In the case of the soiled tile, which had been previously waxed with the liquid solvent type of buffing wax, cleaning of the tile was carried out using the same wax as the cleaning agent instead of the ammoniacal soap solution. This is consistent with the normal practice of maintaining floors waxed with this type of wax.

Table 5 summarizes the results of these studies and shows that in every instance less scrubbing is required to remove soil from waxed tile than from unwaxed tile. In many instances this effect is quite remarkable. For example, the "a" wax on Koroseal gives the same brightness with 1/10 the scrubbing required for the unwaxed tile. The "b" wax after only 10 scrubs gives a reflectance equivalent to the unsoiled original tile. The "c" wax after only 10 scrubs is brighter than the original tile after 150 scrubs. For "Wingfoot" new prepolished tile, the unwaxed tile requires 7½ times the scrubbing required by the tile waxed with the "a" wax to reach a reflectance of 20. For

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the "b" wax the brightness is completely restored after 10 scrubs. For the "c" wax 1/15 the amount of scrubbing required by the unwaxed tile suffices to reach a reflectance of 22.5. In every instance the reflectance for the waxed tiles is higher after 150 scrubs than for the unwaxed. In many instances the brightness of the tile is completely restored to the original value of the unsoiled, unwaxed tile in far less than 150 scrubs.

This advantage resulting from the use of wax is believed to be caused by the action of the wax in reducing the extent to which soil is embedded in the tile. Further, the wax on removal from the surface during scrubbing carries the soil away with it. The wax, due to its behavior as a removable interlayer between soil and flooring, prevents accumulation of embedded soil in the flooring and facilitates removal of soil.

Table 5. Ease of Maintenance—Restoration of Cleanliness by Washing Reflectance vs. Scrubs

Flooring	Wax	Number of Scrubs 0	10	20	30	50	75	100	150
Koroseal	None	16	17	18	18.5	19	20	21	22.5
	a.	16.3	21	23.5	25.5	27	29.5	32	32.5
	b.	30.5	51	51	51	..	..	..	..
	c.	13	28.5	37	40	41.5	44.5	45.5	45.5
	(Before soiling—51)								
Wingfoot, old	None	9	9	10	10	11.5	13	14.5	17
	a.	9	11.5	14	15.5	18	21	22.5	25
	b.	24	39	39	39	..	..	..	..
	c.	10	29	32	32	33	35	36	37
	(Before soiling—40.5)								
Wingfoot, pre-polished	None	10.5	12.5	14	17	18.5	20	21	22
	a.	14.5	20	30	34	38	..	..	..
	b.	26.5	39	39	39	..	..	..	..
	c.	9.5	22.5	29	31	32	32	35	37
	(Before soiling—38.5)								
Gold Seal Vinyl Inlaid Tile	None	13.5	16	17	18	19	20	21.5	24
	a.	12	17	21.5	24	26	30	32	34
	b.	16.5	20.5	25.5	26	27	28	32	34
	c.	13	29	42	47	49	49	50	52
	(Before soiling—57)								
Corlon	None	13	14	16	18.5	18.5	20	21	23
	a.	12	16	19.5	22	25	27.5	30	32.5
	b.	17.5	29	33	35	37	38	39	39.5
	c.	14	24	32	34	35	36	37	37
	(Before soiling—45)								
Lifetime Vinyl Floor Tile	None	14	19	23	25	28	31	26	27.5
	a.	13	25	55	62	62	64	68	71
	b.	30	70	70	70	..	..	..	..
	c.	13	41	50	53	55	57	58	61
	(Before soiling—72)								

Preservation of tile surface (appearance)

THE question of whether or not less marring of the tile surface can be expected of waxed tile than of unwaxed tile was investigated by carrying out abrasive wear tests. The test used is based upon the change in appearance or gloss of the flooring sur-

Table 6. Effect of Abrasive Wear on Surface Appearance Gloss 60°, Gardner Glossmeter

Kind of Flooring	Koroseal		Wingfoot, unburnished		Wingfoot, pre-polished		Gold Seal		Corlon		Lifetime	
No. Abrasions	None	Wax	None	Wax	None	Wax	None	Wax	None	Wax	None	Wax
					(Type a Floor Wax)							
0	9.5	29.5	3	24.5	14.5	39	7	25	13	40	48	66
24	7.0	15	3	11.3	6	20	5.5	13	9.5	27	11.5	15.5
48	7.0	12	3	10.0	5	17	5	13	8.5	24	8	14.5
72	7.0	12	3	9.5	5	16	5	12	8.5	22	7.5	14.5
96	7.0	12	3	10.0	4.5	16	5	13	8.5	22	7.5	16.5
120	7.0	12	3	9.5	4.5	16	5	13	8.5	22	8	16.5
After Wax Removed	8.5	13.5	5	7.5	8.5	20	6.5	7	7	11.5	10.5	31
					(Type b Floor Wax)							
0		33.5		35		39.5		26		44		87
24		21		19		20		14		27		26
48		18.5		14		15.5		13		26		16.5
72		15.5		13		14		12		24		16
96		14		11		13		12		24		16
120		14		9		12		13		23		16
After Wax Removed		10		7		12.5		7.5		11		37.5
					(Type c Floor Wax)							
0		32		38		39		28		39		
24		17		22		14.5		12		21		
48		14.5		12		13		11		16		
72		14		10		13		11		15		
96		14		10		13		11		15		
120		14		10		13		11		15		
After Wax Removed		10.5		6		12.5		7.5		11.5		

a.—Conventional emulsion type floor wax. b.—High resin content emulsion type floor wax. c.—Liquid solvent cleaner type floor wax.

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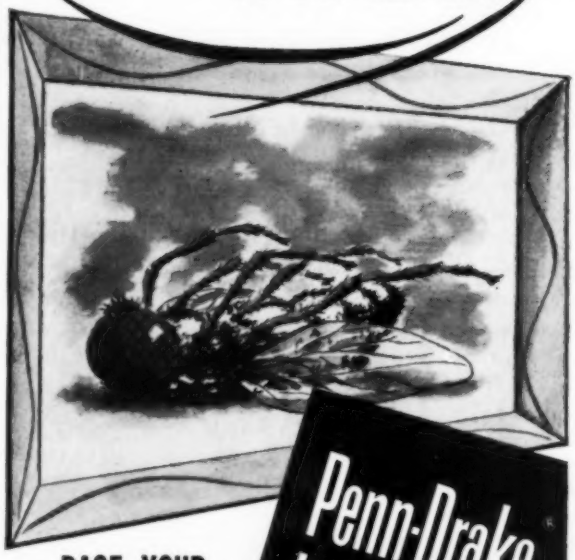

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A.P.I. Gravity	49/50.5
Specific Gravity at 60°F	0.775/0.785
Saybolt Viscosity at 100°F	30/31 sec.
Flash Point C.O.C.	170/180°F
Fire Point C.O.C.	180/190°F
Initial Boiling Point	385/395°F
Distillation End Point	465/480°F
Unsulfonatable Residue	98%
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face due to abrasive contact with shoe soles and gritty soil.

For this purpose the steel rollers of the apparatus referred to in the soiling tendency test were faced with sole leather and to the sole leather facings was cemented a fine grade of standard sandpaper (600 A Minnesota Mining and Manufacturing Co.).

Two coats of wax were applied to each of two panels of vinyl tile. In each test a pair of panels coated with one of the wax samples were fastened at opposite points in the periphery of the machine bed. The spaces between the test panels were filled with panels of the same tile, uncoated. The gloss of the coated panels was determined before the start of the test and then after each 24 abrasive contacts with the rollers.

The gloss values with increasing number of abrasion cycles were determined. The same test was carried out using unwaxed tiles.

After the abrasion procedures, the tiles were scrubbed to remove the wax and equivalent treatment was given the originally unwaxed tiles. Gloss was then determined. The lower the gloss the greater the marring of the surface by the fine sandpaper. This is judged to give an indication of whether or not a beneficial effect on preservation of surface appearance derives from the use of a wax coating.

The preservation of tile surface test used aims to evaluate marring of the surface by measuring loss of gloss resulting from the action of fine abrasive particles in producing fine but not readily visible scratches in the surface. It is postulated that under service conditions there is abrasion of the surface by siliceous dirt particles and that one visible effect of such action is loss of gloss of an originally glossy surface. Thus measurements of gloss change vs. abrasion under controlled conditions are taken as a measure of the relative resistance to marring. The effect of the wax in protecting the tile against surface marring is judged finally by comparing gloss after removing the wax film to gloss of the unwaxed panel, where both panels have been subjected to the same degree of abrasive wear.

Table 6 conclusively shows that waxes preserve the gloss of vinyl under the type of abrasion resulting from the scuffing action of shoe soles and gritty soil. In every instance, regardless of the wax used, the gloss of the waxed tile is higher than the gloss of the unwaxed tile after subjection to an equal number of abrasive contacts.

After stripping of the wax from the abraded tiles and comparison with the abraded unwaxed tiles washed in the same way, we find that in every case the tiles which had been previously waxed and then abraded show a higher gloss than those which had not been waxed.

In the case of "Lifetime Tile" which has a very high initial gloss, this effect is particularly noticeable. For some tiles which exhibit a low initial gloss, for example "Koroseal" and "Wingfoot" old, unburnished, there is actually a net gain in gloss of the tile as a result of abrasive wear on the waxed surface.

Floor service tests

WE HAVE started a series of floor service tests on all of the types of vinyl flooring and the results of these tests will be reported at the December meeting of the Waxes and Floor Finishes Division of C.S.M.A.

Since starting the various tests reported herein, we have learned that Congoleum-Nairn, Inc., Kearny, N. J., have, since January, 1953, been producing a new and smoother surface "Gold Seal Vinyl Inlaid Tile" which they designate as "Bermuda Hue." We will report on the effect of the use of floor wax on this new Congoleum tile in December.

Summary

TO SUMMARIZE, our study of the effects produced by the use of three types of floor wax on five brands of vinyl tile discloses the following: 1. The appearance of the tile, as judged by gloss measurement, is greatly improved by waxing. 2. The use of wax does not significantly change the coefficient of friction or slip properties of tile. 3. The soiling tendency of vinyl tile may be substantially decreased by waxing. 4. Soil removal by scrubbing is greatly facilitated where vinyl tile has been previously waxed. 5. Pronounced protection against marring of the surface results from waxing. 6. Some difficulty may be encountered in waxing brand new tile flooring with emulsion type waxes because of poor wetting and spreading. However, our experience with vinyl floor installations indicates that after a period of use this condition disappears.

If called upon at this point to answer the question "Does vinyl flooring need waxing?" we can state on the basis of our laboratory tests:

Yes! If we wish to improve its appearance.

Yes! If we wish to maintain its initial pleasing appearance.

Yes! If we wish to maintain its cleanliness.

Yes! If we wish to ease the problem of removing soil and preventing soil embedment.

In these respects vinyl floorings do not differ from other types of flooring for which decades of usage have amply proved the need for and desirability of waxing.

Betz Changes Name

A change of name from Betz Chemical Co., Toledo, O., to Betco Corp., was announced recently by Carl J. Betz, president.

New Anti-Dust Sprays

Sprays that make furniture attract less dust and prevent shocks on contact with auto seat covers have recently been announced by three manufacturers. Producers of the sprays say treated surfaces stay dust-free, brighter, and shock-free for weeks, and the compounds are harmless and non-staining. It is recommended for treatment of phonograph records, where it not only repels dust but is claimed to improve sound quality. Du Pont "Freon" provides the propellent for the anti-static compound. Some of the manufacturers and their products are: Phillips & Phillips Corp., Chicago, "Negasta"; Electro-Chemical Products Corp., East Orange, N. J., "Ecco Dust-Free", "Walco Stati-Clean", "Photo-Sweep", "Ecco-Stop-Shok"; and Injection Molders Supply Co., Cleveland, "Record Spray."

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STROBANE

By D. L. Kent*
B. F. Goodrich Chemical Co.,
Cleveland

Frank O. Hazard
Insecticide Testing Laboratories,
Wilmington, O.

Friar Thompson, Jr.
Athens, Ga.

Tests show new chlorinated terpene hydrocarbons derived insecticide to be useful in controlling many household insect pests . . .

STROBANE is the most promising insecticide in a new group of chlorinated terpene products which have been undergoing screening tests in the B. F. Goodrich laboratories and associated company laboratories for the past three years. Strobane is the chlorination product of a mixture of terpene hydrocarbons, and has a chlorine content of approximately 66 percent. The material is a yellowish-amber viscous liquid soluble in most of the common solvents, and has a faint terpene odor.

Usually, more conclusive data than will be presented here, are given when presenting a new insecticide, but because screening tests indicate such a wide range of activity against insects and because the order of toxicity to warm-blooded animals is different from that of other chlorinated products, a general report on Strobane is in order at this time. The toxicology of Strobane as it has been developed to date will be discussed in the July issue by Dr. H. A. Shelanski of the Industrial Toxicology Laboratories of Philadelphia; so we will not comment on the toxicological properties of Strobane in this paper except where these properties seem to be the deciding factor in whether or not Strobane shows promise in some particular field. The samples of Strobane used in the tests reported in this paper represent material that has been produced in a semi-plant operation. Experimental samples are typical of what will be produced when the material becomes a commercial economic poison and is produced in large volume. Many batches of Strobane have been manufactured by this process and each batch carefully checked for uniformity of insecticidal action and toxicity to warm-blooded animals.

Present Status

AT THE present time no request has been filed with the Production and Marketing Administration in Washington for a permit to sell any quantities of Strobane. It was apparent from the initiation of tests on Strobane and its related compounds that these compounds might not be restricted to any narrow field. General information is reported at this time to encourage qualified research personnel to proceed with tests so that when the fields of commercial use are determined, data will be available. This will save considerable time in the commercial development of this product.

In most fields related to man, warm-blooded animals, and food crops, chronic toxicity is the limiting factor in the use of any insecticide. Chronic toxicity tests covering a period of almost six months show no limiting characteristics in several forms of application. This is another reason that a report on the development of Strobane as an insecticide is made now.

The data and information given in this paper are in no way to be construed that the B. F. Goodrich Chemical Company is now offering any quantities of Strobane for sale. Samples of Strobane are available to qualified personnel for research and field development provided the limitations and regulations promulgated by the Production and Marketing Administration are followed.

Formulations

EXTENSIVE laboratory tests have shown that Strobane can be prepared and used in practically all conventional forms. The low vapor pressure of Strobane, however, may limit its use in vaporizers.

Liquid fly sprays, aerosols, emulsion concentrates, and livestock sprays represent the insecticidal formulations which are of the most interest at this time. Strobane can be formulated into liquid fly sprays, livestock sprays, and aerosols with no difficulty. Its solubility in deodorized petroleum hydrocarbon is 40 percent at room temperature. Strobane requires no auxiliary aromatic solvents as is quite common with other chlorinated hydrocarbons. Since the maximum level at which Strobane will be used is somewhere in the neighborhood of two or three percent, solubility will not be a limiting factor. Neither do higher viscosity white oils present any problem with Strobane. These are the types of oils that might be used in livestock sprays. Two of the larger aerosol filling companies have tested Strobane in the preparation of experimental aerosols and report no difficulties in manufacturing aerosols containing as high as five percent Strobane.

Emulsion concentrates containing approximately 25 percent Strobane are relatively easy to manufacture without the aid of an aromatic solvent. However, if concentrations higher than 25 percent are desired, an aromatic solvent should be considered. Research is underway to determine the most suitable emulsifying agents for concentrations higher than 25 percent.

In the field of aerosols, Strobane seems to have several unique properties. No aromatic solvent is required to hold Strobane in solution. Strobane leaves no white objectionable residue when applied as an aerosol. At low concentrations the odor of Strobane is undetectable by most people. In no cases have Strobane aerosols been found to be irritating or objectionable.

* Presented by D. L. Kent at the 39th mid-year meeting of the Chemical Specialties Manufacturers Ass'n., Chicago, Ill., May 18, 1953.

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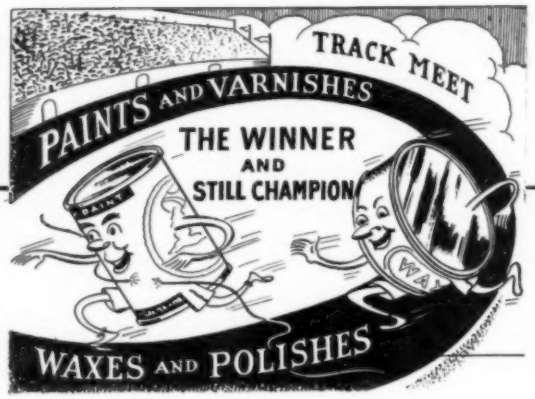

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Table No. 1. Peet-Grady Tests of Pyrethrum-Strobane Combinations*

Percent by Weight Pyrethrins	Strobane	10 Min. Knockdown	24 Hr. Kill	O.T.I. Difference
.050	.25	75.5	69.7	+18.6
.050	.50	89.0	87.3	+37.3
.050	1.00	89.5	89.5	+35.5
O.T.I.		95.3		
.075	.25	82.5	75.0	+23.9
.075	.50	92.6	88.9	+36.9
.075	1.00	93.7	93.7	+39.6
O.T.I.		95.9		
.100	.25	93.8	91.7	+38.1
.100	.50	94.5	94.3	+44.8
.100	1.00	95.5	94.6	+45.1
O.T.I.		95.2		
.125	.25	94.2	86.6	+36.6
.125	.50	97.5	95.2	+43.2
.125	1.00	95.1	94.0	+40.4
O.T.I.		94.6		

* Small group method—ten paired tests with O.T.I.

Table No. 2. Peet-Grady Tests of Pyrethrum-Strobane Combinations*

Formula

By Weight Pyrethrin	Strobane	Knockdown 3 Min.	Knockdown 10 Min.	Percent Dead 24 Hrs.	O.T.I. Difference
.063	..	87.7	93.4	26.6	— 7.4
.063	.25	86.8	93.0	67.1	+33.1
.063	.50	88.4	93.9	85.0	+51.0
O.T.I.		93.7	96.3	34.0	

* Large Group—4 replicates.

Table No. 3. Peet-Grady Tests of Lethane 384-Strobane Combinations

Percent By Volume Lethane	By Weight Strobane	10 Min. Knockdown	24 Hr. Kill	O.T.I. Difference
1.5	1.00	98	96.5	+49.5
1.5	.50	96	69.0	+23.0
1.5	.25	97	55.0	+ 8.0
O.T.I.		96	47.0	...

Table No. 4. Official Peet-Grady Tests of Thanite-Strobane Combinations*

Composition in Base Oil Strobane % By Wt.	Thanite % By Vol.	Total No. Flies	% KD 10 Min.	% Kill 24 Hrs.	O.T.I. Diff.
0.25	1.5	1155	87.7	42.5	+10.8
0.25	2.0	1246	90.7	55.1	+23.4
0.25	2.5	1383	94.1	54.7	+23.0
0.25	3.0	1115	93.5	61.0	+29.3
O.T.I.		2606	92.0	31.7	...
0.5	1.5	1593	92.0	60.9	+21.2
0.5	2.0	1577	94.5	68.0	+28.3
0.5	2.5	1556	95.4	64.8	+25.1
0.5	3.0	1827	95.0	74.7	+35.0
O.T.I.		3452	91.0	39.7	...
1.0	1.5	1497	88.5	69.9	+36.1
1.0	2.0	1322	91.3	74.7	+40.9
1.0	2.5	1456	91.7	73.4	+39.6
1.0	3.0	1445	94.7	76.0	+42.2
O.T.I.		2914	90.5	33.8	...

* Large group on laboratory reared houseflies.

Household Sprays

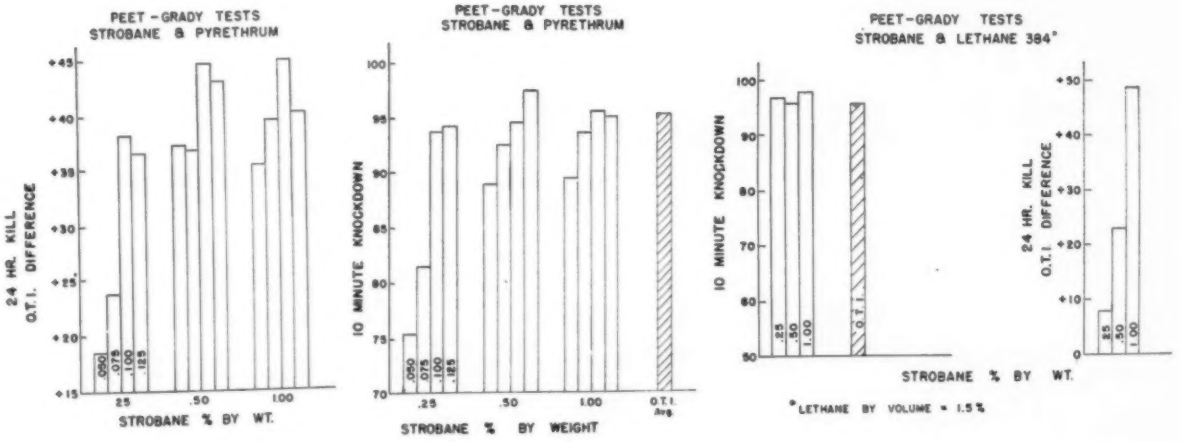
IN SPRAY type household insecticides a knockdown agent is essential. Experimental work to date has shown that Strobane requires the addition of a knockdown agent in both aerosols and fly sprays. Strobane has been evaluated against house flies in standard Peet-Grady tests with all of the commonly used insecticides giving a suitable knockdown. The accompanying tables show results of Peet-Grady tests with several concentrations of Strobane in combinations with pyrethrins, allethrin, thanite, lethane and combinations of pyrethrin and piperonyl butoxide.

Cockroach Tests

INASMUCH as other insects must be considered in the development of a new toxicant for aerosols and fly sprays, a number of other tests have been conducted. Tests with roaches were conducted against several species. The usual variations in results occurred. The results obtained in the several different roach tests are given in accompanying tables. In the roach tests a knockdown agent was not added in order to determine the toxicity of Strobane alone against roaches.

Miscellaneous Tests

STROBANE sprays have also been found to be effective against usual insects controlled by household sprays. These tests were not conducted by any official method but were simply spot checks to determine whether household insecticides containing Strobane as an active ingredient would be



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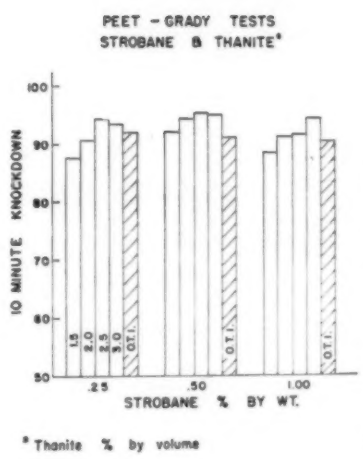
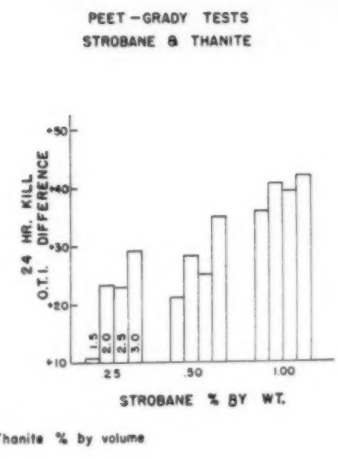
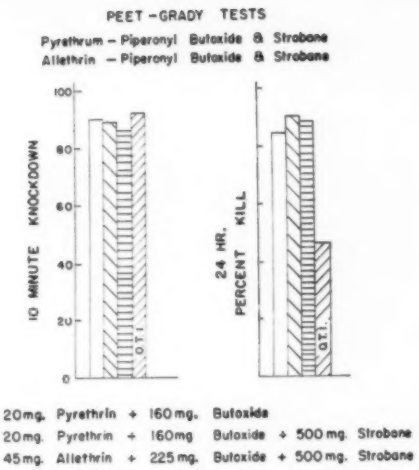


* Thanite % by volume



Thanite % by volume



effective in killing these insects.

Tests against such pests as the silverfish, bedbug and house spider showed a 100 percent mortality after 48 hours. These tests were conducted in a Peet-Grady chamber with the insects exposed in open enamel pans on the floor of the chamber.

Residual Action

NO SPECIFIC tests have been conducted on residual action of Strobane with the exception of a few spot checks. McDuffie of the Bureau of Entomology and Plant Quarantine Laboratories in Orlando, Fla. reports that a one percent solution of Strobane when applied to small squares of woolen cloth gave a kill of human

Table No. 5. Peet-Grady Tests of Strobane Formulations with Combinations of Pyrthrins—Piperonyl Butoxide and with Allethrin

Material (mg/100 ml)	No. of Test	Percent Knockdown 3 min.	5 min.	10 min.	Percent Mortality KD Kill	Total
20 mg. Pyrethrins + 160 mg. Butoxide	6	38	52	90	82	84
20 mg. Pyrethrins + 160 mg. Butoxide + 500 mg. Strobane	5	31	42	89	89	90
45 mg. Allethrin + 225 mg. Butoxide + 500 mg. Strobane	6	36	47	86	86	88
500 mg. Strobane	6	3	6	9	..	..
O.T.I. (100 mg. Pyrethrins)	6	47	58	92	46	..

Large Group Method—Approx. 400 houseflies per test.

Table No. 6. Cockroach Tests

Race track tests—20 nymphs sprayed with 12 ml. in a 32" ring from 18" with Peet-Grady gun.

American Roach Nymphs:

	No. of Replicates	% Dead and Moribund 24 Hrs.	48 Hrs.	72 Hrs.	144 Hrs.
Check	2	0	0	0	0
Oil Check	1	0	0	0	0
.5% Strobane	3	0	3.3	6.7	6.7
2.0% Strobane	3	0	3.3	6.7	21.7
O.T.I.	3	66.7	63.7	68.3	73.3

Oriental Nymphs:

	No. of Replicates	% Dead and Moribund 24 Hrs.	48 Hrs.	72 Hrs.	144 Hrs.
Check	2	0	0	0	0
Oil Check	1	0	0	0	0
.5% Strobane	3	0	0	0	0
2.0% Strobane	3	5	13.3	16.7	20
O.T.I.	3	15	15	16.7	16.7

German Adult Males:

	No. of Replicates	% Dead and Moribund 24 Hrs.	48 Hrs.	72 Hrs.	144 Hrs.
Check	2	0	0	0	2.5
Oil Check	1	0	0	20	20
.5% Strobane	3	3.3	21.7	33.3	36.7
2.0% Strobane	3	61.7	96.7	96.7	100.0
O.T.I.	3	45.0	58.3	58.3	61.7

Table No. 8. Cockroach Tests

Tests against German Roaches. Adult Males. WFA Method. Dosage .7 cc.

% Strobane	Percent Kill 48 Hrs.
.5	64
1.0	49
3.0	100
5.0	100
O.T.I.	82

3 replicates—15 roaches each.

Table No. 7. Roach Tests

Direct Spraying Technique—Tentative C.S.M.A. Method

% Concentration	24 Hr. Percent Dead and Moribund	48 Hr. Percent Dead and Moribund
German Cockroaches (4th Instar Nymphs)		
.050	20	27
.125	20	30
.250	15	40
.500	30	43
1.00	20	37
2.00	66	80
O.T.I.	23	43
American Cockroaches (Large Nymphs)		
.05	13	26
.125	0	6
.250	26	33
.500	0	6
1.00	6	20
2.00	26	40
O.T.I.	53	66
Oriental Roaches (Large Nymphs)		
.050	13	6
.125	6	20
.250	0	0
.500	46	46
1.00	13	20
2.00	26	26
O.T.I.	40	40

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Castile Baby Soap
Hospital Green Jelly Soap
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40% Cocoanut Oil Liquid Soap
Coco-Castile Shampoos
Rug & Upholstery Shampoo
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Metal Polish
Cedar Oil Furniture Polish
Mop & Floor Spray
Window Spray

Write for Description, Samples and Price List

HAAG LABORATORIES, INC.
P.O. BOX 114, BLUE ISLAND, ILL.

body lice for a period of 31 days after the application.

Lindquist, also of the Bureau of Entomology and Plant Quarantine, Corvallis, Ore. reported in a screening type test that Strobane showed little or no action against houseflies. However, his work gives the flies a very short exposure time and low dosage rate. In this test in which it was compared with DDT, it did not show as rapid an effect on the flies as did DDT.

Considerable attention and discussions in the past few years have been given to the resistance of flies to sprays containing chlorinated hydrocarbons or other organic toxic agents. Strobane was applied to the Illinois No. 1 resistant strain of flies as well as a regular laboratory strain of houseflies. On the basis of these tests, no differences in kill have shown up.

Residual tests with a .25 percent concentration of Strobane against the same two strains of houseflies are incomplete; however, tests conducted according to U.S.D.A. procedure reveal no significant differences between the two in the case where exposures are made within 24 hours. Tests repeated two weeks later reveal continued residual effectiveness; however, the resistant strain shows a greater survival. Further replications are needed to establish if this difference in resistance exists. Higher concentrations should be tested and studies made of the period of residual effectiveness.

In our opinion the resistance of flies to chlorinated hydrocarbons has to do more with a residual action than it does with a contact spray action. We believe that when Strobane is applied to insects in combination with a suitable knockdown agent, that substantially good kills will be obtained whether sprayed on resistant or nonresistant flies. This point will be developed further in later research work.

Aerosol Tests

AEROSOL formulations of Strobane were compared with similar formulations of DDT. The tests were conducted in a 1000 cubic foot chamber (10′ x 10′ x 10′), using ap-

(*Turn to Page 177*)

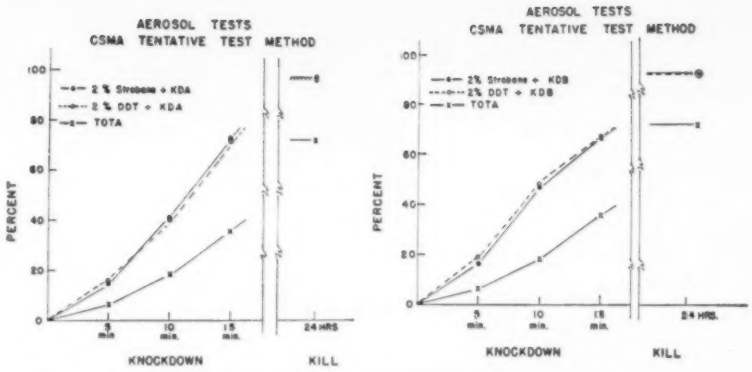

Table No. 9. Tests Against Certain Crawling Insects

Dosage — 12 ml.
Exposure period — 15 min.
Strobane Concentration — .25%

Insect	Number	After 24 Hours: Number Dead	Moribund	% Dead & Moribund	After 48 Hours: Number Dead	Moribund	% Dead & Moribund
Silverfish	30	28	2	100	29	1	100
House Spider	10	10	0	100	10	0	100
Bedbugs	33	14		40	33		100

Table No. 10

TA-3		% Knockdown Minutes 5	10	15	% Mortality 24 Hrs.
Strobane—2%		16.7	38.1	71.5	100
KDA		12.9	36.3	69.6	98.2
Synergist	15%	15.5	49.5	78.6	94.1
Solvent					
Diluent	Avg.	15.0	41.3	73.2	97.4
Freon 11 and 12—85%					

TA-6					
DDT—2%		15.6	55.2	81.3	98.0
KDA		16.4	35.5	68.2	97.2
Synergist	15%	13.3	32.4	66.6	95.4
Solvent					
Diluent	Avg.	15.1	41.0	72.0	96.9
Freon 11 and 12—85%					

TA-4					
Strobane—2%		15.9	52.4	75.4	96.1
KDB		19.2	43.6	61.7	89.5
Synergist	15%	14.7	44.0	64.7	91.0
Solvent					
Diluent	Avg.	16.6	46.7	67.3	92.2
Freon 11 and 12—85%					

TA-5					
DDT—2%		33.8	57.5	76.3	92.6
KDB		16.7	41.1	59.0	90.0
Synergist	15%	17.3	45.6	66.6	94.0
Solvent					
Diluent	Avg.	19.3	48.1	67.3	92.2
Freon 11 and 12—85%					

TOTA		% Knockdown Minutes 5	10	15	% Mortality 24 Hrs.
DDT	2.00%	10.6	21.2	38.3	79.8
Pyrethrins	0.40%	6.3	16.7	34.4	80.4
Petroleum Distillates	12.60%	5.8	17.3	37.5	59.5
		4.9	15.7	34.3	67.6
Freon 11 and 12	80.00%	6.00	12.9	25.8	78.4
		5.8	27.2	42.7	69.0
	Avg.	6.5	18.5	35.5	72.5

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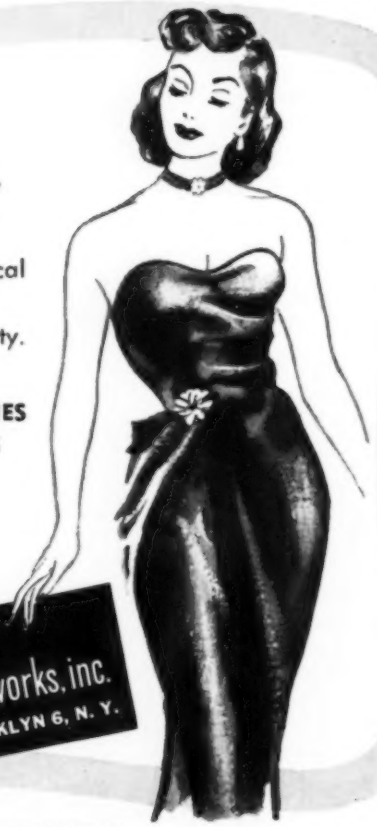

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SANITARY SUPPLIES MANUFACTURERS FOR DISTRIBUTORS — JOBBERS — WHOLESALERS

News

Sanitary Supply Survey

As part of a new product development program, Paul G. Smouse, production manager, Shore Metal

PAUL G. SMOUSE

Products Co., Los Angeles, recently completed a nation wide survey for purposes of determining the current and future equipment requirements of the sanitary supply industry. As a result of this survey, the company announced that plans are under way for the production of many new items and improvements of existing products. At the same time, Shore announced that Louis Eisenberg has been appointed sales manager to promote the firm's "Shoreline" products. He was formerly in charge of the Los Angeles plant of Fuld Bros., Inc., Baltimore, and recently completed a term as president of the Sanitary Supply Assn. of Southern California.

Vetoes Md. Pesticide Bill

Governor Theodore McKeldin of Maryland recently vetoed a bill which would have exempted insecticides and fungicides from the Maryland sales tax. The exemption was asked on the same basis as that applying to fertilizers.

Durm Joins Fuld Bros.

Appointment of William Durm as technical sales-service representative was announced recently by Fuld Brothers, Inc., Baltimore. He is handling Fuld's line of sanitary chemicals and floor maintenance products in the Maryland, Washington, D. C., and Virginia areas. A graduate of the University of Maryland, he formerly supervised the sanitation program in the 45 plants of General Baking Co., New York.

New Insecticide Wax

A new insecticidal floor wax has recently been introduced by Pyrox Chemical Co., Long Island City, N. Y. It is said to be a high gloss, self polishing wax which keeps floors attractive while ridding them of roaches, ants, waterbugs, etc. The new product contains lindane as its insecticidal ingredient. The maker claims that the insecticide floor wax is harmless to children and pets. The product lists for 89 cents a pint and $1.39 per quart.

Entomologist Retires

Dr. John L. Horsfall, an early pioneer in the field of industrial entomology, has recently retired from his post as chief entomologist with American Cyanamid Co., New York. His 37 year career in the field of entomology began with summer research at Iowa State Agricultural College from 1916 to 1919.

Warwick Names Roger

Appointment of J. G. Roger Co., 546 South Longwood St., Baltimore, as the distributor of its products in that area was announced recently by Warwick Wax Co., subsidiary of Sun Chemical Corp., Long Island, City, N. Y.

Clarence R. Cleveland Dies

Clarence R. Cleveland, 63, chief entomologist in the sales technical service department of Standard Oil Co. of Indiana, Chicago, died recently. Mr. Cleveland was in charge of development and technical service of insecticide, herbicide and fungicide products for Standard Oil, where he had worked since 1927. He was the author of many articles on pest control and industrial pesticides, especially on development and uses of petroleum insecticides.

Wilson in New Post

Appointment of Jack L. Wilson as director of sales was announced recently by Pennsylvania Industrial

JACK L. WILSON

Chemical Corp., Clairton, Pa. Mr. Wilson, who has been with the company for five years, continues to serve as assistant to the president. He is a graduate of Mercersburg Academy and Carnegie Institute of Technology.

Guardian Names Hopkins

Appointment of William T. Hopkins as general sales manager was announced recently by Alfred Globus, president, Guardian Chemical Corp., Long Island City, N. Y. Mr. Hopkins was formerly associated with Rapidol Distributing Corp. as sales manager. Prior to that he was assistant general sales manager of Harold F. Ritchie Co.

New Ottawa Germicide

Commercial production of a new germicide, di-chloro-meta-xylenol, in the United States has been in progress since last December, it was announced recently by Dr. Sol Boyk, research director of Ottawa Chemical Co., Toledo, O. The new product, known as "Ottafect" is a variation of "Ottasept" para-chloro-meta-xylenol, and has a high phenolic coefficient, making it useful for general germicidal purposes. It is said to be non-toxic, non-caustic, and non-irritating germicide.

S. B. Penick Dies

Sydnor Barksdale Penick, 71, chairman of the board and founder, S. B. Penick & Co., New York, died

S. B. PENICK

recently at Mountainside Hospital, Montclair, N. J., of complications following a heart attack. He began his business career with the Strother Drug Co., Lynchburg, Va. In 1914 he established his own business, S. B. Penick & Co., and served as its president until 1942. In that year he was elected chairman of the board, and was succeeded in the post of president by his son, Sydnor Barksdale Penick, Jr. He was also chairman of the board of New York Quinine & Chemical Works; president, American Drug Manufacturers Assn.; treasurer, American Foundation for Pharmaceutical Education; chairman, Drug, Chemical and Allied Trades Section of the New York Board of Trade, and a trustee and treasurer of the Columbia College of Pharmacy. He is survived by his widow, five children and twelve grandchildren.

Regional Supply Meetings

Two regional conferences of the National Sanitary Supply Assn. will be held this fall, it was announced recently by Leo J. Kelly, executive vice-president of N.S.S.A. On Thursday and Friday, Oct. 22 and 23 a Western Regional Conference will be held at the Mark Hopkins Hotel, San Francisco. Cooperating in this effort will be the Sanitary Maintenance Suppliers of Northern California, all of whom are members of N.S.S.A. An Eastern Regional Conference will be held at the Park Sheraton Hotel, New York, Wednesday and Thursday, Nov. 18 and 19. Working on arrangements for the New York meeting are W. James Reider of George T. Johnson Co., Medford, Mass., N.S.S.A. Eastern Regional vice-president; Samuel Newman of Creco Co., Long Island City, N. Y., former Eastern Regional vice-president of N.S.S.A. and Martin J. Peters of Moore Brothers Co., New York, who served last year as president of N.S.S.A.

New Cleaner Dispenser

A new dispensing device for attachment to all types of water faucets was announced recently by Multi-Meter Corp., Toledo, O. The manufacturer claims that the "Multi-Meter" unit automatically and accurately measures the correct amount of liquid cleaning material with water to give the proper dilution for positive and measured economy. Raising a lever at the front of the "Multi-Meter" gives a constant cleaning solution and automatically provides clear water when the faucet is shut off and then opened.

Melven G-R-P Vice-Pres.

George A. Melven has recently been elected vice-president of Gillespie-Rogers-Pyatt Co., Inc., importers of shellac, mica and natural resins and manufacturers of bleached shellac and shellac specialties. Mr. Melven has been associated with the company for many years in sales activities.

GEORGE A. MELVEN

Blair Petrolite President

Charles M. Blair has recently been elected president of Petrolite Corp., St. Louis, succeeding J. S. Leh-

CHARLES M. BLAIR

man, who was elected chairman of the board. Mr. Blair attended Rice Institute and the California Institute of Technology, where he specialized in chemistry. Since 1935 he has been employed by the Petrolite Corp., first as a research chemist and later as director of research. He is the author of numerous papers and patents in the fields of organic chemistry and petroleum processing.

Wolcott Makes Glas Spray

The manufacture and sale of "Glas Spray" glass cleaner by Wolcott Corp., 955 Asylum Ave., Hartford, Conn., was announced recently by Frank E. Wolcott, president. "Glas Spray" was formerly made and sold by Glasspray, Inc., Cincinnati. Ben B. Lester, president of Glasspray, is now asosciated with Wolcott as director of sales. Wolcott makes "Chrome-Kleen," "Copper Kleen," and "Easy Off" cleaners under its own name, and also produces a bulk line which is available for jobbers.

New Warwick Distributor

Appointment of N. S. Wilson Co., 150 Causeway St., Boston, as the exclusive New England distributor of Warwick waxes was announced recently by Warwick Wax Co., subsidiary of Sun Chemical Corp., New York. Stocks of all Warwick Waxes are carried by the Wilson company.

Heads New Sales District

A new sales district, encompassing southern New York and northern New Jersey, has been formed

THOMAS J. HUGHES

for the metal division of Continental Can Co., New York, Lenvik Ylvisaker, general manager, northeastern district, announced recently. Thomas J. Hughes has been appointed sales manager for the newly created district. A district sales office has been opened at Getty Ave. and Thomas St., Patterson, N. J., with John P. Bertram, Jr. as sales office manager.

Mr. Hughes, a 1937 graduate of the University of Notre Dame, has been a Continental sales representative in the New York district since 1947, and has been associated with the packaging industry in a sales capacity since 1941.

Expands Denver Office

The Denver office of S. C. Johnson & Son, Inc., Racine, Wis., has been expanded at 1863 Wazee Street, it was announced recently. The firm now occupies the entire third floor of the building.

Low-Price "A" Spray

A new grade "AA" fly spray that is approximately one-half the price of the average pyrethrum-piperonyl butoxide spray has recently been announced by Residex Corp., Newark, N. J. Extensive Peet-Grady and field tests have shown that the formulation, known as "Resikill", has killing properties equal to or better than the usual pyrethrum-piperonyl formulations, according to Residex. Said to be effective against DDT resistant and lindane resistant flies, it has been approved for use in food processing plants, industrial plants, homes, dairy barns and as a cattle spray. The product is being offered for sale through distributors, jobbers, and repackers.

Johnson Appoints Tarvin

Appointment of John C. Tarvin as field sales manager for industrial products was announced recently by S. C. Johnson & Son, Inc., Racine, Wis.

Seeks EQ-53 Brand Names

Requests for the names of manufacturers or formulators of EQ-53, and their brand names, in order to build up a file to be used in answering inquiries concerning supplies were issued recently by the Bureau of Entomology and Plant Quarantine, U. S. Department of Agriculture, Washington, D. C. Producers of EQ-53 were asked to send the brand name of their product and if available, a copy of their labels.

Fellton Opens Own Office

Herman L. Fellton, for the past seven years a vice-president in charge of technical operations for Orkin Exterminating Co., Atlanta, Ga., and also vice-president of the Orkin Institute of Industrial Sanitation, recently announced he had left Orkin and entered private practice as a sanitary engineer consultant, with offices at 15 Peachtree Place N.W., Atlanta, Ga. He is specializing in insecticides and rodenticides, and other sanitary engineering and entomological matters.

The former Orkin vice-president has a $1,266,905 law suit pending against the Orkin Co. owners, whom he charges with conspiring to force him out of the firm and in doing so damaged his reputation and professional prestige. Prior to joining Orkin, Mr. Fellton served for five years as a commissioned officer in the U. S. Public Health Service. Before that he was with the New York City Health Department and was deputy chief of the health department at the New York World's Fair. He has served as a vice-president and as a director of the National Pest Control Assn.

Butcher Transfers Offices

Butcher Polish Co., Boston, recently announced the removal of offices from 84 Broad St. to its new location at 183 Commercial St.

Dog Repellent

A new spray to protect plants and lawns from dogs was announced recently by Bohlender Plant Chemicals, Inc., Tippecanoe City, O. The new item, known as "Dogzoff", is being distributed nationally by direct mail and through drug and hardware stores, and is available to dealers in counter display units. The product comes in "Duraglas" bottles and black metal closures supplied by Owens-Illinois Glass Co., Toledo, O.

New Diversey Bactericide

New bactericide - disinfectant cleaner which features a distinctive pink color for ready identification has recently been introduced by Diversey Corp., Chicago. Named "Diversol CX", this new product contains a new, patented formula of inorganic coloring that allows quick identification to end mixups between disinfectants and other chemical compounds that have caused serious spoilage and waste. It is 100 percent soluble, stable, non-corrosive, has water softening and a penetrating action, and will not stain equipment. "Diversol CX" is packed in 325 pound barrels, 125 pound drums, and 25 pound drums.

New "Diversol CX"

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Clifford W. Phillips, above, who was recently named president of R. M. Hollingshead Co., Canada, Ltd., succeeds Stewart Hollingshead, who became chairman of the board of the Canadian chemical subsidiary of R. M. Hollingshead Corp., Camden, N. J. Mr. Phillips is a former vice-president of Perfect Circle Co., Ltd., Canada.

New Static Free Wax

Parlee Co., Indianapolis, Ind., recently announced its new product, "Staticfreed," a metallic conductive floor wax, said to discharge or conduct static sparks safely where highly inflammable materials are exposed. It is designed to fit economically a need where conductive floors are required. The resistance of "Staticfreed" is from 30,000 ohms to 900,000 ohms. Being a wax, the product can be applied and removed easily. The price is approximately $4 a gallon.

Pantry-Size "Mouse-Prufe"

A new pantry-size package for its "Mouse-Prufe" rodenticide has recently been added to the line of d-Con Co., Chicago. The new, two-ounce rodenticide, which consists of corn kernels impregnated with warfarin, retails for 49 cents.

West Insect Folder

The control of industrial and institutional insect infestations is the subject of an eight-page, illustrated folder recently published by West Disinfecting Co., Long Island City, N. Y. The folder discusses types of equipment, installations and minimum quantities of insecticide needed to rid various sized areas of flying and crawling insects. West's fogging and spraying equipment, and the different West insecticides and fumigants are described in some detail.

Chlordane Story in Life

A story on insect control through the use of chlordane was featured in the May 25th issue of *Life*. Beginning with a double page spread, fully illustrated, the article carries over to two succeeding pages with detailed instructions on proper materials to use for control of specific insect pests. Chlordane is mentioned 15 times in this article, particularly for household and outdoor insects.

New Type Mop Wringer

The entire line of "Geerpres" mop wringers now features completely enclosed gearing, it was announced recently by Geerpres Wringer, Inc., Muskegon, Mich. This improvement is designed to prevent the tearing of mop strings, clothing, etc. Another new feature is in the pressure bars, which are spun at both ends into the double-staggered gears that produce the downward squeezing action of the mop. As a result of this, no moving parts contact the mop at any time except the pressure plates that squeeze the water out and down into the bucket or tank.

Carrying out its "Royal Family of Mop Wringers" theme, Geerpres is now embossing gear covers with names that indicate model and capacity of the wringer. These include the "Floor-King" for 24 to 36 ounce mops, the "Floor-Prince" for 16 to 24 ounce mops and the "Floor-Knight" for mops up to 16 ounces.

Lift Lead Tubes Export Ban

Lead collapsible tubes, used mainly for packaging toothpaste, shaving cream and the like, have been removed from the "positive list" and may now be exported under "General License GRO" to all areas except the Soviet bloc countries, Hong Kong and Macao without prior application, the U. S. Department of Commerce announced recently. It said the action was taken because of the "non-strategic nature" of the tubes and the fact that they are in good supply.

New Smith Sprayer Catalog

A new catalog on its line of sprayers and dusters has recently been published by D. B. Smith & Co., Utica, N. Y. The new illustrated catalog, which is printed in color, is available on request to the company at 405 Main St., Utica, N. Y.

Permatex Expands

Permatex Co., Brooklyn, N. Y., recently announced it had doubled its warehouse and distribution space at 2815 Main St., Dallas, Tex. The enlarged warehouse is used for the company's line of automotive and industrial maintenance chemicals.

"Sprayway" glass cleaner, product of Tru-Pine Co., Chicago, was inadvertently announced in April issue of **Soap and Sanitary Chemicals** as a new aerosol glass cleaner made by Du Pont. The new product, packed, in 11-ounce cans, uses "Freon" made by Kinetic Chemicals Division of Du Pont as the propellent. The new aerosol dispenses a fine spray of cleaning fluid on glass, which is cleaned by wiping with a clean cloth.

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Knoxall Expands Line

Knoxall Co., Indianapolis, manufacturers of potash soaps, waxes and polishes for the jobbing trade, is now making a complete line of soluble and cutting oils formerly made by Ohio Oil Co., Finley, O. Knoxall has acquired Ohio Oil Co.'s formulas and customer lists, according to a recent announcement by O. P. Epler, president of the Indiana firm. Ohio Oil Co. has withdrawn from the industrial oil market.

O. L. Kraft, formerly district lubrication engineer for Ohio Oil, heads the Knoxall lubrication department, according to Mrs. O. C. Winters, vice-president and general manager.

Carl S. Andrews, formerly chief chemist in charge of research and product development for M. Werk Co., Cincinnati, holds the position of chief chemist and technical director for Knoxall. He is supervising laboratory and plant control to insure uniformity in the firm's line of liquid and paste products and cutting oils.

E. D. Bowman, also previously connected with the Werk Co. as supervisor and plant foreman of the fat splitting and glycerine department, is in charge of Knoxall production. At the same time, the company announced that William M. Haverstick, formerly with Ohio Oil, is Knoxall's representative in Marion County, O.

New "Silvium" powdered instant silver cleaner of Silvel Products Co., Brooklyn, is dissolved in warm water. Silver is dipped in solution and rinsed and dried immediately. Comes in one and one-half, three, eight, 16 and 22 ounce sizes. Also in 25, 50, 100 and 250 pound drums for distributors.

New CSMA Phone Number

The telephone number of the Chemical Specialties Manufacturers Association was changed recently to OXford 7-0985.

Offers Packaging Service

A contract packaging service for soaps, detergents, insecticides, disinfectants, deodorants, oils, cleaning compounds, waxes and cosmetic preparations has recently been announced by Curley Co., Philadelphia.

New Hild Brochure

A new brochure describing the latest line of Hild machines for floor scrubbing, shampooing, industrial vacuuming, rug and carpet beaters, and "Hild Re-Color" was announced recently by Hild Floor Machine Co., Chicago. The 40-page catalog is fully illustrated and includes a complete price index, and a section on shampooing rugs and tacked-down carpeting with Hild equipment. Copies may be obtained by writing to the company at 740 W. Washington Blvd., Chicago.

Join Velsicol Sales Staff

Three new staff appointments were announced recently by H. O. Whamond, vice-president in charge of sales, Velsicol Corp., Division of Arvey Corp., Chicago. Dr. Roger W. Roth has been appointed sales manager, agricultural chemicals division; George W. Suave and Howard S. Beaudoin have joined the sales staff assigned to the Western territory.

Located at the Chicago headquarters, Dr. Roth is in charge of domestic and export sales. Before joining Velsicol, he was associated with Commercial Solvents Corp., New York, supervising the sales development of pesticides. A graduate of the New York State College of Forestry at Syracuse, he received his doctorate at Cornell University.

Mr. Suave was formerly engaged by the state of California in its 1949 Mexican Beetle survey, and later, in its supervised control program on cotton insects in the San Joaquin Valley. Since 1950, and up to his joining Velsicol, Mr. Suave was supervising entomologist and cotton gin manager with Boston Land Co., of Calif. Mr. Beaudoin was formerly state entomologist of the Wyoming Department of Agriculture.

DR. ROGER W. ROTH

GEORGE W. SUAVE

HOWARD S. BEAUDOIN

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Analytical and Research Chemists

For over thirty years we have specialized in the analysis of pyrethrum, rotenone and other

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Consultation without obligation

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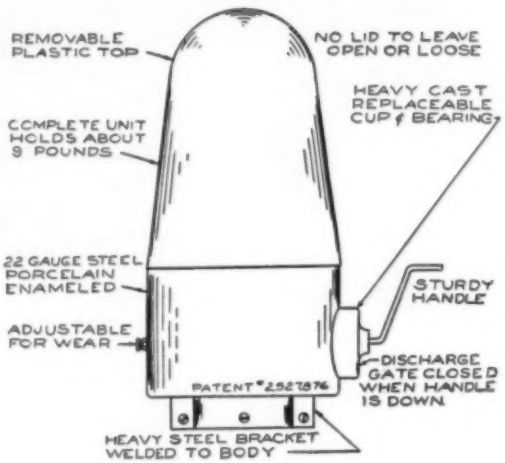
PASTE DISPENSER


REMOVABLE PLASTIC TOP
NO LID TO LEAVE OPEN OR LOOSE
HEAVY CAST REPLACEABLE CUP & BEARING
COMPLETE UNIT HOLDS ABOUT 9 POUNDS
22 GAUGE STEEL PORCELAIN ENAMELED
STURDY HANDLE
ADJUSTABLE FOR WEAR
DISCHARGE GATE CLOSED WHEN HANDLE IS DOWN
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DIVISION SALES MANAGER

A MAJOR manufacturer of industrial granulated and powdered hand soaps, degreasers, cleaning compounds and detergents is seeking two capable men for the position of division sales manager in our Southern Division with headquarters in New Orleans, La., or vicinity; and also in our Eastern Division with headquarters in Philadelphia or the Newark area.

A record of successful past performance as a division or district sales manager or sales supervisor is a prerequisite. These unusual opportunities are the result of this company's growth and expansion program.

Basic remuneration will be salary within $7200 to $8500 range and expenses. Please reply in detail, giving complete information concerning your qualifications and personal background.

An interview will be arranged by an executive of the company at a mutually convenient time.

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Tamms products are widely used in the polish trade, preferred for quality results. Write today for prices and samples.

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Soft Amorphous Type

Grades to meet various abrasive requirements . . . for all kinds of metal polishes.

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Rose and Cream Colors

Once-ground, double-ground and air-float . . . ideal grades for buffing and polishing. Also rubbing compounds.

TAMMS MULTI-CEL

Diatomaceous Earth

Top grade, ground extremely fine . . . a milder abrasive than silica. Best for silver polish.

TAMMS BENTONITE

(Suspension Medium)

A very finely ground colloidal clay . . . wholly soluble. Absorbs five times its weight in water.

TAMMS INDUSTRIES, INC., DEPT. RM-3, 228 N. LA SALLE ST., CHICAGO 1, ILL.

Atlas Names Gottshall

Ralph K. Gottshall was elected president of Atlas Powder Co., Wilmington, Del., it was announced by

RALPH K. GOTTSHALL

the board of directors following a recent meeting. He was also elected chairman of the executive committee. Mr. Gottshall succeeds Isaac Fogg, who became chairman of the board, and who remains as chairman of the finance committee. Mr. Fogg succeeds Leland Lyon as chairman of the board. Mr. Lyon remains as a member of the board.

Mr. Gottshall has served as executive vice-president of the company since May of last year, and as a director and member of the executive committee since 1951. Prior to that time he was assistant general manager of the explosives department. He was graduated from Lafayette College in 1927.

New Folder on Chlordane

A new folder, "Chlordane Controls Lawn Insects", has recently been published by Velsicol Corp., Chicago. Copies are available on request to Velsicol Corp. Division, Arvey Corp., 330 East Grand Ave., Chicago.

Huntington Adds to Plant

Huntington Laboratories, Huntington, Ind., announced recently that they are building a new one-story addition to the plant. According to Earl Brenn, executive vice-president of Huntington, the new building, which is 60 x 160 feet, will be used for warehousing, shipping and possibly house kettles for the manufacture of floor waxes.

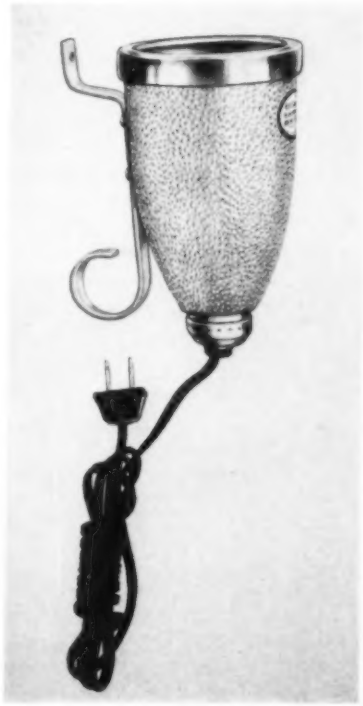
Miss Kelly Marries

Miss Norma Jeanne Kelly, daughter of Leo J. Kelly, executive vice-president of the National Sanitary Supply Assn., Chicago, was married in Chicago, May 23, to William Logue of the Chicago branch of Rawlplug Co. Following a honeymoon trip to New York, the couple will reside in Chicago, where Mrs. Logue has been on the staff of the National Sanitary Supply Assn.

NSF Seal of Approval

Equipment displaying the new seal of approval of the National Safety Foundation Testing Laboratory, Ann Arbor, Mich., was exhibited at the annual meeting and trade show of the National Restaurant Assn., held recently in Chicago. The aim of having manufacturers display the seal, NSF announced, is to help industry make laundering and dish washing equipment sanitary.

New "Fly-Gone" bulb type lindane insecticide vaporizer of Home Manufacturing and Sales Co., Piqua, O. The vaporizer uses a standard 25 watt light bulb to vaporize the Lindane. Made of cast aluminum, the unit comes in red, blue, green and silver.



Durez Names Prahl

Appointment of Dr. Walter H. Prahl as a vice-president was announced recently by Durez Plastics &

DR. WALTER H. PRAHL

Chemicals, Inc., North Tonawanda, N. Y. Dr. Prahl is inventor of the Raschig Process for the synthesis of phenol from benzene. He received his degree of doctor of philosophy from Heidelberg University, Germany.

Non-toxic Insecticide

The development of a new nontoxic insecticide which includes a repellent was announced recently by Jack Mervis, The Oaks Farm, Barrington, Ill. The product, known as "Peg-a-pell", is primarily designed to combat flies, gnats, mosquitoes and other insects that cause discomfort, sickness and deterioration in horses.

Floor Maintenance Data

A new brochure on cleaning, sealing, and maintaining all kinds of floors has recently been published by West Disinfecting Co., Long Island City, N. Y. Maintenance personnel are advised in the folder on how to get out all imbedded grit, grease, and dirt with a cleaner made especially for the floor being treated. Other data covers sealing floors against future dirt penetration with the proper sealer; and another section deals with protecting the cleaned and sealed floor with an appropriate anti-slip wax. Copies of the brochure may be obtained by writing to the company at Long Island City, N. Y.

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Those products which you are not equipped to manufacture yourself . . . those odd items which do not fit into your plant . . . mosquito repellent, flea powder, salves, ointments, tube filling, powder filling, etc. . . . we buy materials, containers, pack, store, and ship your specialties . . . most modern methods and equipment . . . strictly confidential . . . and our charges are low . . . consult us without obligation.

R. Gesell, Incorporated
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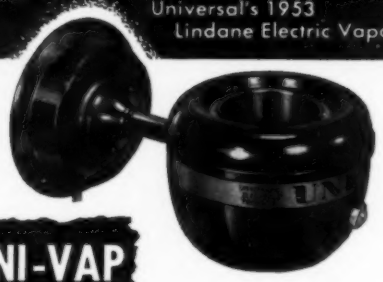
Universal's 1953 Lindane Electric Vaporizers



UNI-VAP

Lindane has proved effective in eliminating or controlling every insect pest. Now Universal's Uni-Vap provides maximum effectiveness from Lindane with an entirely new construction feature. It's exclusive with Uni-Vap, and it assures complete vaporization at a constant rate, regardless of outside conditions. PLUS features include Chromalox heating element, Westinghouse Uni-Therm thermostat, and guaranteed long service with low maintenance. Dealers' inquiries invited.

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New Eng. P.C.A. Banquet

The New England Pest Control Assn. recently held its annual banquet and dance at the Boston University Club. Chairman of the committee on arrangements was Hart Harris, Jr., New England representative of S. B. Penick & Co., New York.

Sprayer Manual

A new 40-page manual on insecticide sprayers and dusters has recently been published by the National Sprayer & Duster Assn., Chicago. The illustrated handbook brings together under one cover the latest information on types and uses of sprayers and dusters, simplified for practical use. The association is sending the manual without charge to all county agents, 4-H Club leaders, teachers of vocational agriculture and extension specialists. The regular price is $1.00, with reduced rates for purchase by groups, clubs and classes. Copies are available on request to NSDA, 4300 Board of Trade Building, Chicago.

Goodrich to Build Plant

Plans to build a new $8,500,000 chemical plant for the manufacture of acrylonitrile at Calvert City, Ky., were announced recently by John R. Hoover, president of B. F. Goodrich Chemical Co., Cleveland, O. The new plant is scheduled to start operation in the fall of 1954. This will be the company's second plant at Calvert City. It opened a $6,000,000 vinyl chloride monomer plant there recently.

Praises Bobrick Dispensers

How its soap dispensers have reduced maintenance costs in schools by 50 percent was revealed in a pamphlet recently announced by Bobrick Manufacturing Co., Los Angeles. The pamphlet presents the statements of an interview with the maintenance officials of a school board system operating over 400 schools. The school officials stated that after every known soap dispenser had been tested, in their opinion the best and most fool-proof model was the Bobrick 47 Monel Lather Dispenser. Replacements due to vandalism, formerly amounting to 3000 per year, have been reduced to approximately 100 per year with the Bobrick 47, according to the pamphlet. Also, the school officials favored liquid soap for economy in use and ease and economy in maintenance of the dispenser, and only recommended powdered soap for use in manual training shops.

Royal Offers EQ-53

Royal Home Products, Cincinnati, has announced recently that it is offering "EQ-53" water soluble mothproof rinse.

Pesticide Handbook 1953

Pesticide Handbook by D. E. H. Frear, College Science Publishers, State College, Pa., 204 pages, nine by six inches, paper bound $1.25 and cloth bound $3.00. The 1953 edition of this directory contains over 5,000 trade names of pesticides with information on their active ingredients, manufacturers and uses. A list of pest control operators from all sections of the United States is a novel feature added this year.

Harry T. McClintock Dies

Harry T. McClintock, 76, vice-president for many years of Mac-Lac Co., New York, died recently at his home in Rahway, N. J. Surviving are his widow, Mrs. Linda E. Emslie McClintock; a brother, Ralph W. McClintock, president of Mac-Lac Co., and a sister, Mrs. Malcolm B. Ayres.

Anderson Leaves NSDA

Earl D. Anderson, secretary of the National Sprayer & Duster Association for the last five years, has left the association and joined Stran-Steel Division of Great Lakes Steel Corp., Encorse, Detroit, it was announced recently. With the departure of Mr. Anderson from the association, Frank J. Zink has assumed the duties of secretary, in addition to his duties as counsel.

Sonneborn Names Officers

Newly elected officers of L. Sonneborn Sons, Inc., New York, were announced by Dr. F. Sonneborn, president, following a recent meeting of the board of directors. Newly elected officers are: Edgar E. Brand and Rudolph Cubicciotti, vice-presidents, and Henry Sonneborn III, secretary. All of the new officers have been with the company for many years. The firm is celebrating its 50th anniversary.

DR. HENRY SONNEBORN

EDGAR E. BRAND

RUDOLPH CUBICCIOTTI

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The man we seek should have a creative approach to research... ability to carry through projects independently from inception to conclusion... to stimulate co-workers.

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DURABLE, EFFICIENT and INEXPENSIVE

No. 11 TRANSPARENT PLASTIC DISPENSER *with push-up type valve.*

Applications: Specially designed for service station, garage, home use.

Features: Durable, transparent plastic container. Inexpensive... low in maintenance cost. Close-fitting top swings open for convenient filling. Positive metal agitator prevents packing—meets most soap flow characteristics. Push-up plunger permits quick, one-hand operation. Steel sleeve surrounding dispensing mechanism gives added strength... provides secure support for steel bracket for wall mounting.

Materials: Exterior metal parts have baked-enamel finish to harmonize with plastic color.

Specifications: Size—8" high x 4" diameter. Weight—6 oz. Capacity—approximately 1 pint (liquid measure).

Packing: Standard packing—1 unit to individual re-shipper carton (weight—12 oz. per carton).

No. 10 ALL-PLASTIC DISPENSER *with push-in type valve.*

Applications: Industrial plants, public buildings, office buildings, schools, theaters, gasoline stations—also a practical convenience for the home laundry or kitchen.

Features: Transparent plastic container. Wide-opening top for easy filling (Lock-top—Model 10-L—optional). Positive agitator prevents packing, insures smooth, even flow. Non-clog thrust-in discharge valve easy to clean. Heavy brackets for direct mounting to wall or pipe.

Specifications: Size—8" high x 3¼" x 3½". Weight—14 oz. Capacity—1 quart (liquid measure).

Packing: Standard packing—1 unit to individual re-shipper carton (weight—1 lb. 5 oz.); repacked 1 dozen to shipping case.

CHROME SOAP DISPENSERS (Polished)
Nos. 3 & 4 — PUSH-IN and PUSH-UP Types

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Bottles • Jars • Collapsible Tubes

Please notice: All equipment—including soap crutchers and freezing tanks—is stainless steel.

OLD EMPIRE MFG. CHEMISTS, INC.
Mt. Prospect & Verona Aves., Newark, N. J.
HUmboldt 4-2121

Strobane . . .

(*From Page* 163)

proximately 100 flies per test, in accordance with the CSMA Tentative Aerosol Test Method.

All formulae contained the same percentage of ingredients. Tests TA-3 and TA-6 gave a direct comparison test of Strobane vs. DDT with KDA as a knockdown agent. TA-4 and TA-5 showed the same comparison but with KDB as the knockdown agent. Further, by comparing TA-3 to TA-4 and TA-5 to TA-6 comparative results of the two knockdown agents may be observed with either Strobane or DDT.

The results of these tests indicate that Strobane can be substituted for DDT at an equal percent in the given aerosol formulae without loss of insecticidal activity against houseflies.

We wish to point out that the above tests are not to be accepted as conclusive, but do indicate that further investigation of Strobane as an ingredient in insecticidal aerosols would be advisable.

Finally, the first question that most formulators will ask is: "What does the material cost?" Present information from the operation of a small pilot plant indicates that Strobane when produced in volume will be competitive with most commonly used insecticide toxicants.

It can be seen from the results given in this paper that the commercial development of Strobane is not a fact at this time. This information has been presented as a guide for qualified personnel to evaluate Strobane as a possible ingredient for their insecticide formulae.

Summary

A STATUS report discussing the potential usefulness of Strobane, the chlorination product of a mixture of terpene hydrocarbons, is presented. These data show that Strobane is effective against many species of household insects and a broad range of agricultural insects. Toxicological studies on Strobane indicate that it will be acceptable and safe for widespread use. Results are encouraging and suggest that more work be done in research and field development to evaluate fully the possibilities of this material particularly in the field of aerosols, space sprays, surface sprays, and livestock sprays.

"De-Fly-Er" automatic insecticide vaporizer of De-Bug-Er, Inc., Madison, Wis., features new longer wearing cup and a newly designed thermostat.

Stock Sprays

(*From Page* 137)

because of their annoying and restless hurrying over most parts of the animals' bodies, presumably in search of food, their presence in the dirtiest places one moment, and the next instant crawling over sparkling bright milking utensils, to say nothing of the filth in which they breed and emerge as adults, put them well up on the list as one group of insects to be eradicated or held to a minimum on the farm.

Adult house flies can be controlled safely in fairly tight barns, milk rooms, and other farm buildings with quality space sprays or dual purpose stock sprays applied with powered dispersal machines which will insure full coverage at the rate of about one ounce per 1,000 cubic feet. Where insect resistance has not become too evident, supplementary residual insecticides containing DDT or other accepted chlorinated hydrocarbons applied to likely spots outside the dairy barn or milk room and other farm buildings are most useful as aids in a planned spray schedule for the elimination of flies.

To date, the industry has not produced a stock spray that will meet all the requirements of the perfect insecticide to be used on farm animals and probably such a spray will never be developed. This long sought for stock spray must be absolutely safe to the animals under treatment even when it is applied in amounts slightly over that considered sufficient by the manufacturer. It should kill most of the insects that attack livestock, certainly those so claimed on the label. Any claims for repellency particularly against biting flies, should be of a type easily demonstrated. Also, day to day applications of the ideal stock spray should not stain the animal or leave the hair or hide in anything but its normal condition.

Campbell in New Offices

Campbell Chemicals Inc., St. Louis, recently announced the removal of its offices from 406 Market St. to 3807 S. Kings Highway.

Tornado Misses Williams

Williams Chemical Co., Waco, Tex., distributors of janitor supplies and equipment, recently issued a letter of appreciation to those suppliers who offered aid after a tornado had struck the city. In a letter to its suppliers the company stated:

"So many of our suppliers have written, wired or called us with regard to personal and other damages inflicted upon us by the tornado which hit Waco May 11, at 4:40 P.M., and their complete services were offered to us. A million thanks for these gracious offers. Frankly, it has been one of the few bright spots during these past several days.

"Fortunately, for us, our damages were minor and we are in good shape. For instance, with the exception of the Roosevelt Hotel, the whole block in front of us was wiped out. Also two blocks in front of us, three blocks behind us and four blocks to the East were damaged up to 100 percent, and this was only part of the damages which probably amounted to 50 million dollars, more or less; and 113 lives have been lost so far.

"I am not, and Waco is not soliciting funds; however, if any of you wish to make cash contributions to the Waco Disaster Fund, I will personally see that it gets to the proper authorities. Again, let me thank each of you personally."

DAVID E. WILLIAMS,
Williams Chemical Co.

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DETERGENTS

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Experienced salesman with twenty years' successful selling, best personal and business record. Interested only in handling established and known line. Full exchange of references. If interested, send details of proposed arrangement to

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METAL SPONGES

Use the Kurly Kate metal sponge for clearer—easier—thorough cleaning. Will not splinter or rust—never cuts hands—never injures metal or plated surfaces. Kurly Kate tops all metal sponges for safety, efficiency, economical speed. Made in STAINLESS STEEL, NICKEL SILVER and BRONZE.

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ADVISOR ON AGRICULTURAL CHEMICAL PROBLEMS AND INVESTIGATIONS
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Additional Precision Rebuilt Machinery with New Equipment Efficiency

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- H-A Automatic Soap Slabbers
- Empire State and Crosby Foot Soap Presses
- Toilet Soap Mills — 2, 3, 4, 5 roll
- Blanchard 10A Soap Powder Mill
- Mikro Pulverizer
- Filling and weighing machines for flakes, powder, etc.
- Steel Soap Frames, 1000 to 1200 lb. cap.
- Automatic Soap Wrapping Machines
- Sperry and Shriver Filter Presses, various sizes
- Amalgamators
- H. Automatic Soap Cutting Tables
- Proctor & Schwartz Soap Chip Dryers complete
- Dopp Steam Jacketed Soap Crutchers
- Powder Mixers, Day, Robinson, Broughton, etc., all sizes
- Soap Dies for Automatic and Foot Presses
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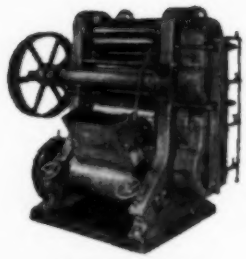

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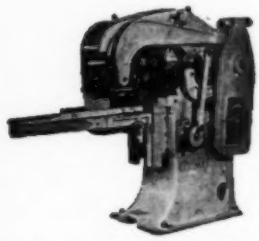

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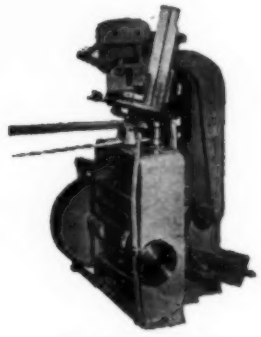

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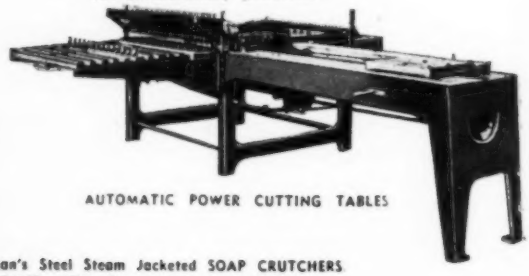

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Salesman: Opening with large manufacturer of raw materials for chemical specialty, drug, insecticide, etc., industries. No experience in this line necessary, although desirable. Young man with good record to be trained for permanent sales job. Give full details: education, employment, salary desired, etc., to Box 751, c/o *Soap.*

Representatives Wanted: We have an opening available. Southern New England. Institutional division. Liberal remuneration. Experience necessary. Write Huntington Laboratories, Inc., Huntington, Indiana.

Wanted: Man with broad chemical and soap manufacturing experience for medium-sized long-established Pacific Coast plant for key production position. Will consider man with chemical engineering and production managerial experience other fields. Salary $7500. Give all details, age, and references. Address Box 752, c/o *Soap.*

Salesman: Unusual opportunity for aggressive, alert experienced cleaning compound salesman covering established Detroit territory with tremendous expansion potential. Well known and highly regarded products and company. Salary and commissions plus paid insurance and retirement plan. Address Box 753, c/o *Soap.*

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Soapmaker & Chemist: Competent. Having long experience in making of all kinds of soaps and cleaning compounds. Experienced chemist and glycerine recovery. Can take full charge of production. Address Box 756, c/o *Soap.*

Chemist: Household products. Widely experienced in waxes, polishes, lacquers, adhesives, emulsions, also automotive chemicals. Desires connection with progressive firm. Metropolitan area preferred. Address Box 757, c/o *Soap.*

Research Chemist: B.S. 14 years experience in development production, technical service, control of industrial detergents, soaps, emulsions, solvents, surface-active agents. Desires position in development of industrial detergents. References. Address Box 758, c/o *Soap.*

Sales Representative: Thoroughly experienced in aromatic chemical, compound, essential oil and flavor fields. Would like to establish connection with a progressive concern in which ability, experience and contacts can be used to greatest advantage. Well acquainted with midwest and eastern trade. Address Box 759, c/o *Soap.*

Books—see pg. 32

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Soap Plant Manager: Experienced superintendent or plant manager available for new connection in soap industry. Twenty years practical soap manufacturing experience. Can take full charge. For full details, write to Box 760 c/o *Soap*.

Soap Maker: Experienced soap maker located Havana, Cuba, desires new position with soap manufacturer. Will go anywhere, but prefers Latin America. Speaks both English and Spanish. For further information write to Box 761, c/o *Soap*.

Lines Wanted: Manufacturers representative desires heavy chemicals to sell to industrial trade, fine chemicals for pharmaceutical manufacturers, bulk compounds, and packaged specialties for drug and department stores. Will stock or sell drop shipments directly from factory. P. O. Box 443, Detroit 31, Michigan.

Miscellaneous

Wanted: One copy February 1952 issue SOAP AND SANITARY CHEMICALS. Urgently in need to complete file. Write to Mr. J. H. Wilson, Medical Chemist, Canadian National Railways, 890 Notre Dame St. West, Montreal, Que., Canada.

Distributor: Sales agent covering the state of Louisiana seeks distributorship for sanitary chemicals, soap specialties, etc. Can supply reasonable amount of capital. Could move good quantities of five-cent soap bar also. Give details to Box 762, c/o *Soap*.

Reprints Synthetic Detergents Up-To-Date II available from Mr. J. W. McCutcheon, 475 Fifth Ave., N. Y. C.

Miscellaneous

Wanted: Kettles, frames, pulverizers, cooling rolls, chip dryers, plodders, cutting tables, evaporators, packaging units, automatic soap presses, mixers, stainless steel tanks. Will consider idle or operating plant. P. O. Box 1351, Church St. Sta., New York 8, N. Y.

For Sale

For Sale: Midwest Chemical Specialty Manufacturer wishes to dispose of stock of powdered soap dispensers, packed in original individual cartons. Have approximately 560-Large S-10 white dispensers and 280 smaller M-4 Pearl-Gray, made by Ace Dispenser Company. Will sell below maker's asking price. Address Box 763, c/o *Soap*.

For Sale: Viscolizers and homogenizers. Completely rebuilt and guaranteed, with late type stainless steel sanitary heads and pressure valves. Also machines with standard heads and valves. Send for bulletin and prices. Otto Biefeld Co., Watertown, Wis.

For Sale: Complete soap or sanitary chemical plants. Also individual items such as crutchers, plodders, mills, mixers, presses, dryers, filling equipment, etc. R. Gelb & Sons, Inc., State Highway No. 29, Union, N. J.

For Sale: 1 Kent 5 roll steel mill water cooled 12 x 32 with 15 H.P. motor, $1200.00. One heavy duty Day dough mixer complete with 7½ H.P. motor with switch and control box $500.00 Sacrifice, need space. Address Box 765, c/o *Soap*.

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For Sale: Sodium Perborate minimum 10 per cent Oxygen content. Spot lot available for immediate delivery. C. Lievense, Ltd., 11 Broadway, New York. WHitehall 4-8640.

For Sale: Will sell at sacrifice 400, 50-gal. drums, soap-synthetic detergent paste useful for emulsifying, wetting and cleansing purposes. F.O.B. N.Y.C. Similar to Duponol paste. For further details write Box No. 764, c/o *Soap*.

Sanitary Chemicals, new, up-to-date book. See page 112.

For Sale: 1—Houchin 10″ jumbo plodder; 1—Pneumatic Scale Packaging line complete: 1—Lehmann 12″ Plodder; 1—Houchin 14″x36″ 5-roll inclined watercooled mill, 30 H.P. motor; 1—Baker 20″x33″ 5-roll mill, 55 H.P. motor; 4—Jones automatic soap presses, A, K, E vertical, C pin die; 2—Package Machinery Co. model TT and model N soap wrappers; 5—Steel vertical, jacketed soap crutchers, 5,000 lb., 3000 lb., and 1000 lb.; 1—6 knife soap chipper, m.d.; 1—42″ x 100″ steel flaking roll; Filter presses 12″ to 42″, powder fillers; dry powder mixers, 12,000 lb., 3000 lb. and smaller sizes; paste and liquid mixers; Rotex screens; Hammer mills; soap frames; Dopp jacketed kettles 100, 350, 600 gallon; Blackmer pumps; tanks; carton gluer-sealers. Ask us to quote on your requirements. Tell us what idle machines or plants you have for sale. Consolidated Products Co., Inc., 15-21 Park Row, New York 38, N. Y. Phone BArclay 7-0600. Inspect our stock at our warehouse, 331-341 Doremus Ave., Newark, N. J.

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For Sale: By I. E. Newman, 5602 Blackstone Ave., Chicago, Ill.; Jones Automatic Laundry & Toilet Soap Presses; 1500# to 6000# Crutchers; 10″ Plodder; Automatic cutting table; Type S Wrapper; Filter Presses; Powder Mixers, etc.

Static Freed Chemical prevents static electricity. A metallic conductive wax that discharges static sparks. Safe to use in areas where highly inflammable materials are exposed. Trial order $4.00 gallon. Parlee Corp., 829 Ft. Wayne Ave., Indianapolis, Ind.

For Sale: Steel and stainless steel kettles and tanks. Powder Mixers; filter presses; packaging equipment. Perry Equipment Corp., 1410 N. 6th St., Philadelphia 22, Pa.

For Sale: Proctor & Schwartz 6-Fan automatic soap chip dryer. 2-roll chilling unit, large roll 48″ dia. Empire State foot presses. Soap frames. Allbright-Nell 4′ x 9′ chilling rolls. Blanchard #14 soap powder mill. Lehmann 4-roll W. C. 12″ x 36″ steel mill. Houchin 8½″ x 16″ 3-roll and 18″ x 30″ 4-roll Granite Stone Mills. Kettles and tanks, iron, copper, aluminum and stainless. Dryers vac. & atmos. Jones automatic soap presses. Slabbers and cutting tables, hand & power. Crutchers. Six-knife chipper. Filter presses 12″ x 42″. Wrapping & sealing machines. Powder, paste & liquid mixers. Rotex sifters. Filling machines, Grinders, Hammer mills. Colloid mills. Three-roll steel mills 8″ x 22″ to 16″ x 40″. Portable elec. agitators, pumps, etc. Send for bulletin. We buy your surplus equipment. Stein Equipment Company, 107—8th St., Brooklyn 15, N. Y. STerling 8-1944.

For Sale: One 5,000 gal. double jacket horizontal Pressure Cooker. Excellent condition. Contact Southwest Metal Co., P. O. Box 215, Glassport, Penna.

All subscriptions to SOAP & SANITARY CHEMICALS entered or renewed at this time include the 1953 SOAP BLUE BOOK & Catalog, the 280 page buyers' guide, out March 25. Yearly subscription, U. S. $4.00; Canadian & Pan American, $5.00; all others $6.00.

Standard Reference Books:
See pages 32 & 33

Warwick 10th Anniversary

"SUGAR cane wax will become the most important vegetable wax on the market" within a few years, Maurycy Bloch, vice-president of Warwick Wax Co., a division of Sun Chemical Corp., Long Island City, N. Y., stated recently.

Mr. Bloch spoke at a buffet supper commemorating the 10th anniversary of Warwick Wax Co. The affair was held May 17 in the Gold Coast Room of the Hotel Drake, Chicago, during the 39th mid-year meeting of the Chemical Specialties Manufacturers Assn.

"The refining of sugar cane wax made way for new and revolutionary developments in wax technology," Mr. Bloch said. "Demonstration of the performance and economic advantages of sugar cane wax has resulted in its rapidly expanding usage through the cooperation of the carbon paper and business form industry and with ever increasing application in other wax-consuming industries."

At the Warwick dinner, attended by approximately 250 guests, comprising executives from chemical specialty manufacturers, Warwick Wax distributors, and Sun Chemical Corp., Dr. John J. Fish was awarded a plaque in recognition of his "inventive genius and outstanding contributions to wax technology." Dr. Fish is director of research and refining for Warwick. He pioneered "Cardis" oxidized waxes which are credited with having brought Warwick's market to include 90 percent of the producers of polishes in the United States and Canada.

Warwick Wax Company, it was revealed, has in the last five years so diversified its line of waxes for the polish, paper and other wax-consuming industries that the company now operates with four refineries and 30 warehouse locations.

TGA Meets

(*From Page 55*)

E. G. Young, of E. I. Dupont de Nemours & Co., Inc.

As the aerosol market has grown in the last decade to an estimated 95,000,000 units in 1953, personal products such as shaving lather, hair lacquer, sun tan oils, personal deodorants, colognes, burn remedies and foot sprays have been added to the list of products packed by this method. Approximately one-half of the units packed in 1953 are estimated to fall into the category of personal products. The most popular product of this type is shaving lather and in 1952, 88% of the drug stores surveyed carried aerosol shaving lathers.

The packaging of aerosol products introduces additional factors not present in ordinary packages which must be studied in the laboratory. Compatibility studies must be conducted under pressure with the propellent in addition to the formulation work necessary with other personal or cosmetic products.

Finally pressures of the aerosol formulation must meet certain government regulations and practical considerations. These pressures are governed by the choice of the propellent, the amount of propellent used and the effect of the solvents in the product concentrate on the pressure of the propellent.

The spray character of the final product must be studied and adjusted to give the most desirable effect. The factors governing spray character are illustrated by wet sprays, such as hair lacquers, and by foam products, such as shaving lathers.

Corrosion of the product which is generally packed in metal containers must be studied. Since many cosmetic packages make use of ethyl alcohol, a difficult corrosion problem may be present. Shelf life testing is required to properly evaluate this problem.

Despite all of these additional problems introduced by packaging the cosmetic product in aerosol form, there are many satisfactory products on the market although the industry is still in its infancy.

"Shampoo Formulation," by H. W. Zussman, Alrose Chemical Co., Cranston, R. I.

Shampoo additives are increasing in importance and number. Cream shampoos require opacifying agents (usually fatty alcohols, higher alcohol sulfates), while clear shampoos now are formulated with clarifying agents (organic sequestrants, hydrotropes, alkylolamides and polyethyleneglycol derivatives) to prevent precipitation of poorly soluble salts or raps, depress cloud point and to solubilize finishing agents; both types often require thickeners and gelling agents. Coconut soap shampoos may be fortified with water softeners and lime soap dispersants to give a creditable performance in moderately hard water. Counter-irritants for synthetic shampoos now include mild tanning agents, polypeptides, carboxymethylcellulose and related compounds. Aerosol packaging has introduced the use of propellents and the problem of corrosion inhibitors.

Of more general utility are additives such as: Foam stabilizers (alkylolamides) which help produce flash lather and improve lathering on oily scalps; Germicidal agents (phenolics); Lustrants (usually oil substances, possibly optical bleaches); Anti-static agents to improve manageability of hair; Hair softeners — mineral oil, metal soaps, fatty alcohols, sterols, cationics.

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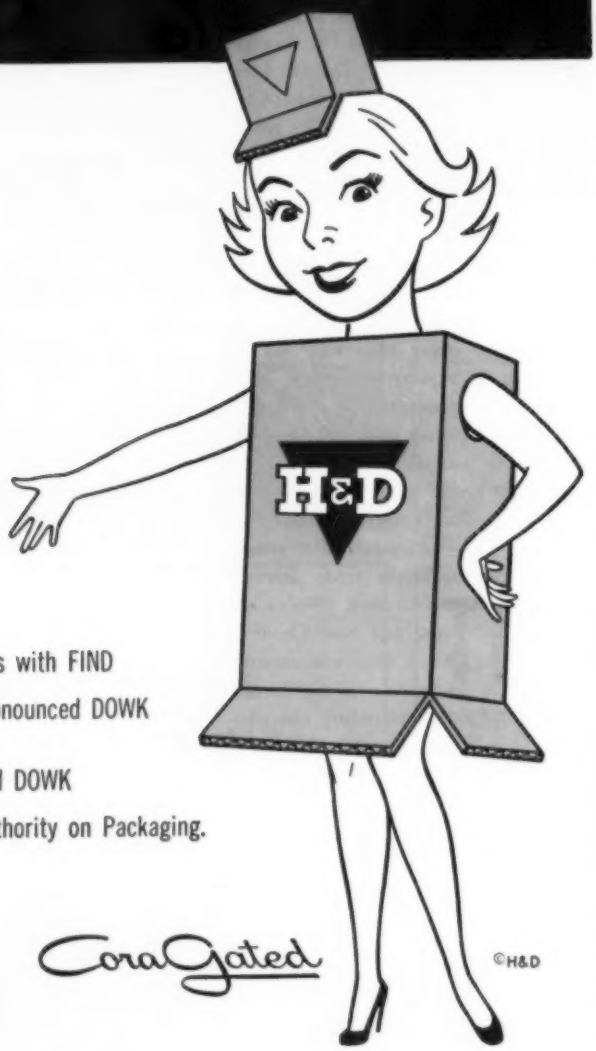

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Reader Sees It . . .

(*From Page* 41)

was in the soap was sufficient to raise a presumption of negligence during the manufacturing process. The second rather curious point in the case is that liability for breach of warranty was sustained, although there was no privity of contract between the manufacturer and the ultimate user since the soap was purchased through an independent outlet. Normally, in cases of this nature, a manufacturer is liable on a warranty theory only where he has had direct contractual relationships with the party bringing the suit. Because the decision of the court in this case conflicted with one handed down by another Ohio court in a similar case (Mali v. Colgate-Palmolive-Peet Co.) the record has been certified to the Supreme Court of Ohio for a final review.

GEORGE A. BURROUGHS
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Washington, D. C.

Pest Control Book

The annual publication of the Association of Economic Poisons Control Officials has recently been released, and for the first time combines association business with descriptions of some of the chemicals used as pesticides. The first section of the book is devoted to uniform laws, regulatory principles, definitions of terms, papers presented at the 1952 meeting in Washington and other pertinent information of interest to those engaged in pest control activities.

The description of the chemicals section is a compilation of all available data on approximately 100 materials used in pest control. Detailed information concerns the common name, chemical name, empirical formula, definition, chemical and physical properties, analytical methods, toxicity, antidote, use precautions, residues (removal methods and prevention), uses, phytotoxicity, and storage and shipping directions. The book is available for $3.00 from Dr. A. B. Heagy, Association of Economic Poisons Control Officials, Box HH, Univ. P. O., College Park, Md.

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Tale Ends

FOR publishing a tough editorial recently about insecticide vaporizers, we have been taken to task from several corners. Likewise, we have received some applause. Maybe we were a little too rough on those marketers of lindane vaporizers who seem to be doing everything in their power to safeguard the public when using those devices. But invariably, the good are condemned with the bad. We realize that these vaporizers have many useful purposes, and have been quick to defend them for such puposes when they have been attacked. However, the "quick buck" boys have invaded the field, placing the legitimate manufacturers at a disadvantage. Much still remains to be said on both sides in this controversy.

* * *

A second annual aerosol festival is scheduled for Washington, D. C. as part of the 40th anniversary meeting of the Chemical Specialties Manufacturers Assn. next December. In view of the mushroom growth of the aerosol industry over the past year or two, entries in this best-package aerosol contest this year should be double those of 1952. Entries are to be made by brand and product owners and merchandisers themselves. Full details will be published later. But if you have a package which you believe is a good one, begin now to think about entering it in the aerosol festival package contest. Entries will probably close early,—as early as October 1.

* * *

Today we have instruments to measure most everything. But when it comes to odors, the "most sensitive scientific instrument for detecting, identifying and analyzing odors is the human nose," according to John von Bergen, speaking before the Air Pollution Control Assn. recently. "When the man in the street says 'it stinks,' that is a scientific statement of fact," asserted Mr. von Bergen. And, we might add, when a housewife says that your product stinks when she sprays it around the home, it should be a warning that maybe you too could use the services of a good perfumer. Or when she dumps your detergent into the dishpan also. Poor odor can destroy sales as readily as good odor can aid them.

* * *

America today is very much pet minded. Nothing is too good for Fido, Rover or their feline counterparts. New dog and cat products have come to market in great profusion during the past few years to take advantage of this soft-hearted demand. Included have been many dog shampoos of every conceivable composition. The latest of these, however, wins our gold-plated door knob award of the year. The label states that it contains chlorophyll, lanolin and lindane, not to mention other ingredients of merit. How about adding a dash of colloidal gold just to balance off the formula? We'll suggest it to the manufacturer.

* * *

J. L. Brenn recently returned to the U. S. from Europe where he killed two stones with one bird. He attended the meeting of Rotary International in Paris last month and then went on to England for the coronation of Queen Elizabeth. While in France, he spent a month touring that country by car. In his latest travels, he was accompanied by Mrs. Brenn. Last year, Mr. Brenn toured the Orient. In between trips he helps his son, Earl Brenn, with the management of the Huntington Laboratories, Huntington, Ind., of which he is president.

* * *

An aerosol containing a detergent and glycerine for use in liquefying thick, viscid mucus in bronchopulmonary ailments has been introduced by Winthrop Stearns under the name of Alevaire. The detergent used is Rohm & Haas' Triton WR-1339, 0.125%, with glycerine 5% and Sodium bicarb 2%. The sputum liquefying product, an outgrowth of studies on tuberculosis patients at Seaview Hospital, New York, is an aerosol medication. The new product can be administered by means of any standard aerosol or nebulizer technic.

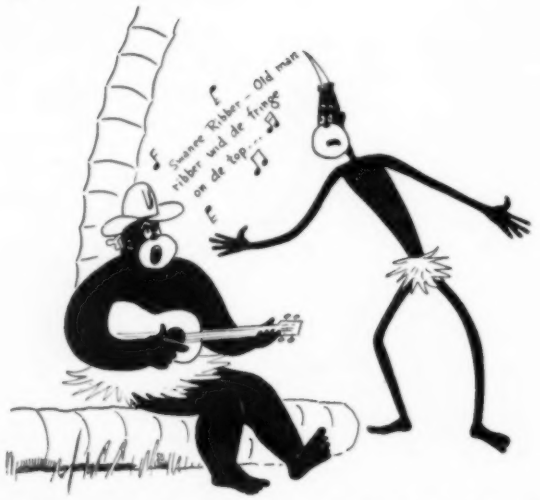
* * *

An exhibition of chemical patents held recently at the London Patent Office, according to *The Chemical Age*, listed some patents for soap manufacture which dated back to 1622. One was issued to Sir Edmund Harewell for "sondry kindes of soapes and also makinge of soape ashes, pott ashes, and salt for soape."

* * *

Fred Othman, columnist who writes funny stuff for the Scripps-Howard newspapers mostly out of Washington, D. C., recently wrote a piece about Harry Gordon, head of Picto Soap Co., Pittsburgh, and his picture soap, and how the soap dissolves away only on one side leaving the picture on the cake all the time it is being used. In typical Othmanian fashion, he told of how he washed with a cake of Picto soap carrying a picture of the President and bearing the legend, "Clean up with Ike." But said the head of Picto, the hotels are not going for his soap like the stores. If he knows what hotels are paying for their soap today, he probably has his answer.

Garbled



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